Redline Changes

Lila Canyon
7-15-2009

2 of 3

0035

C/007/013 Incoming

UtahAmerican Energy, Inc.
Lila Canyon Project
P. O. Box 910
East Carbon, Utah 84520
Phone: (435) 888-4000
(435) 650-3157
Fax: (435) 888-4002

#3351

COPY

July 15, 2009

Daron Haddock
Permit Supervisor
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RECEIVED
JUL 15 2009
DIV. OF OIL, GAS & MINING

Re: UtahAmerican Energy, Inc. Horse Canyon Mine 09-003 C/007/013. Response to Deficiencies Task ID #3017 Surface Design Changes Lila Canyon Mine

Dear Mr. Haddock,

Attached you will find two (3) copies of revision 09-003 which responds to the deficiencies in the surface design change submittal.

The perimeter of disturbed area remains the same at 42.6 acres. The islands of undisturbed have been reduced resulting in the number of undisturbed within the disturbed decreasing from 33.9 to 25.3

The number of pads remain the same but the locations have been changed. The material storage pad is now the bathhouse pad, the bathhouse pad is now the coal pile pad, and the coal pile pad is now the material storage pad.

C1 and C2 forms, redline strikeouts, and CD's containing the complete submittal are included.

Should you have any questions please call.

Sincerely,

R. Jay Marshall

R. Jay Marshall
Chief Engineer/Project Manager

File in:
C/007/013 2009, Incoming
Refer to:
- ☐ Confidential
- ☐ Shelf
- ☐ Expandable

07/15/2009

APPLICATION FOR PERMIT PROCESSING

Permit Change ☐	New Permit ☐	Renewal ☐	Transfer ☐	Exploration ☐	Bond Release ☐	Permit Number: ACT/007/013
Title of Proposal: Surface change deficiencies Task ID #3017 09-003						Mine: Horse Canyon
						Permittee: UtahAmerican Energy, Inc.

Description, include reason for application and timing required to implement:

Instructions: *If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation*

☐ Yes	☐ No	1. Change in the size of the Permit Area? ____ acres Disturbed Area? ____ acres ☐ increase ☐ decrease.
☐ Yes	☐ No	2. Is the application submitted as a result of a Division Order? DO #
☐ Yes	☐ No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes	☐ No	4. Does application include operations in hydrologic basins other than as currently approved?
☐ Yes	☐ No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes	☐ No	6. Does the application require or include public notice/publication?
☐ Yes	☐ No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes	☐ No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes	☐ No	9. Is the application submitted as a result of a Violation? NOV #
☐ Yes	☐ No	10. Is the application submitted as a result of other laws or regulations or policies? Explain:
☐ Yes	☐ No	11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes	☐ No	12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2?)
☐ Yes	☐ No	13. Does the application require or include collection and reporting of any baseline information?
☐ Yes	☐ No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes	☐ No	15. Does application require or include soil removal, storage or placement?
☐ Yes	☐ No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☐ Yes	☐ No	17. Does the application require or include construction, modification, or removal of surface facilities?
☐ Yes	☐ No	18. Does the application require or include water monitoring, sediment or drainage control measures?
☐ Yes	☐ No	19. Does the application require or include certified designs, maps, or calculations?
☐ Yes	☐ No	20. Does the application require or include subsidence control or monitoring?
☐ Yes	☐ No	21. Have reclamation costs for bonding been provided for?
☐ Yes	☐ No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes	☐ No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

X Attach 3 complete copies of the application.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

R. Jay Marshall 7/13/09
Signed - Name - Position - Date

Subscribed and sworn to before me this 13 day of July, ~~19~~ 2009

Mary V. Kava
Notary Public

My Commission Expires: May 16, 2012
Attest: STATE OF Utah
COUNTY OF Carbon

MARY V. KAVA
NOTARY PUBLIC • STATE of UTAH
COMMISSION # 574260
COMM. EXP. 05-16-2012

Received by Oil, Gas & Mining
RECEIVED
JUL 15 2009
DIV. OF OIL, GAS & MINING

ASSIGNED TRACKING NUMBER

Application for Permit Processing
Detailed Schedule of Changes to the MRP

Surface change deficiencies Task ID #3017 09-003

Permit Number: ACT/007/013

Mine: Horse Canyon "Part B" Lila Canyon

Permittee: UtahAmerican Energy, Inc.

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. **Include page, section and drawing numbers as part of the description.**

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☐ REPLACE	☐ REMOVE	Chapter 1 Text Page 13
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 1-1 Murray Energy Holdings Information to End of Section 1
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 1-3 (All)
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 1-2
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Chapter 2 Text Pages TOC, 9, 10, 12, and 14
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 2-1
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 2-2
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 2-3
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 2-4
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Chapter 3 Text Pages 19, 20, and 39
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Chapter 4 Text Page 3
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 4-3 (Air Quality)
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Chapter 5 Text (all)
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 5-4 (All)
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 5-7 (All)
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 5-8 Text Page 1
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-1A
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-2 (Tom)
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-5

Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

RECEIVED

JUL 15 2009

DIV. OF OIL, GAS & MINING

Application for Permit Processing
Detailed Schedule of Changes to the MRP

Surface change deficiencies Task ID #3017 09-003	Permit Number: ACT/007/013
	Mine: Horse Canyon
	Permittee: UtahAmerican Energy, Inc.

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. **Include page, section and drawing numbers as part of the description.**

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-6
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-7 A1
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-7 A2
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-7 A3
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-7 A4
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-7 B1
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-7 B2
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-7 B3
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-7 C
☐ ADD	☐ REPLACE	☐ REMOVE	Plate 5-8
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 6-2 end (rock slope material analysis)
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Chapter 7 Text Pages: TOC, 1-94. Keep Pages 95-End"
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 7-3 Page 21
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 7-4 (ALL)
☐ ADD	☐ REPLACE	☐ REMOVE	Plate **7-2, 7-5**, 7-6A 7-6B
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	Appendix 8-1 (all)
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	

Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

Response to Surface Deficiencies
July 15th 2009

R645-301-113.300 -PWB, In conjunction with the detailed design change amendment to the MRP (Task 3017), please update Appendix 1-3 to include the violation records for all affiliates during the years 2007 and 2008.

Appendix 1-3 has been updated.

R645-301-121-200 -JCH, The information on the C2 form and in the application needs to clearly identify what information in chapter three has been changed in lieu of the proposed amendment.

The total chapter three was replaced due to a change in printers and format. The actual text changes to the chapter are pages 19, 20, and 39. Redline strikeout is included in submittal.

R645-301-121-200 -PHH, The discussion for disposal of mine development waste and coal processing waste must be re-written such that it is clear and concise.

Sections discussing disposal of mine development waste and coal processing waste have been clarified.

Plate 5-2 shows the powder and cap magazine storage site on the topsoil storage pile, Please correct the plate to show the storage location for the explosives magazine adjacent to,I but not on the topsoil storage pile.

Powder and Cap magazine location has been changed to the water tank pad.

Section 520 (Refuse Piles) and Appendix 5-7 refer to a Temporary Refuse Pile. Please provide the location of the Temporary Refuse Pile on Plate 5-2.

Plate 5-2 has been revised to show location of the mine development waste material. Appendix 5-7 and Section 520 has been rewritten for clarity

R645-301-121-200 -JDS, The Permittee needs to correct the statement in Section 553 that states,

"Some minor cut slopes along the reclaimed road may be left after reclamation due to the difficulty and inability to reclaim all material pushed over the side while making the road cut."

to state that cross section 16+00 is on Plate 5-7B-2 rather than 5-7B-1.

Page 62 has been revised to state Plate 5-7B-2.

R645-301-121.200, -150 -JDS, The Permittee must proved Figures 1, 2, 3, 4,4a, 5a, 5b, 6a, 6b, and 7 of Appendix 7-4 in both electronic and hard copies of the submittal.

A complete copy of Appendix 7-4 has been submitted.

R645-301-121-200 -JDS, The Permittee needs to remove the incomplete version of Appendix 7-4 from both the hard and electronic copies of the submittal, and submit a complete copy of the revised Appendix 7-4 with the PE stamp(s) signed and dated.

A complete signed copy of Appendix 7-4 has been submitted both in hard copy and electronic.

R645-301-12.100 1-200 -JDS The permittee needs to clarify the statement in Section 553;

All underground development waste brought to the surface and coal processing waste generated on the surface as a result of coal processing will be placed in the coal mine waste (refuse) disposal area and reclaimed in accordance with R645 regulations.

According to several statements in the MRP, rock-slope underground development waste will be disposed of at the Lila Canyon Mine; all other underground development waste brought to the surface and processing waste will go to wildcat Loadout.

Section 553 210 has been rewritten clarifying the handling of underground coal mine waste and processing waste.

R645-301 R645-301-121.200 -JDS Peak Flow used in the pond volume calculations in Table 11a includes flow from UA-5, which is not identified. There is no information on watershed UA-5, which is not identified. Thee is no information on watershed UA-5 on Plates 7-2 and 7-5 nor in Tables 1, 3, 4, 5 or 6 (although there is an unlabeled item between UA-4 and UA-6 in Table 3). The Permittee must identify watershed UA-5 on Plates 7-2 and 7-5 and include the parameters and calculations related ot this watershed wherever appropriate in Table 1 through 13b, and include the Watershed Calculations sheet for this watershed.

As part of the previous submission, the area of UA-5 was included in UA-1 area as it reported to the UC-1 culvert. The note in the bottom of Table 11a was inadvertently missed.

To make the drainage plans for the future easier to

understand, the drainage for UA-5 was added back into the text, tables, and plates for this submission.

R645-301-121.200-JDS, The Permittee needs to clarify the proposed size of culvert UC-1.

Culvert UC-1		48 inch (4 ft) diameter	60 inch (5 ft) diameter
	Chapter 5		Section 520 - page 15
	Chapter 7	Section 744.100 - page 86	
		Plate 7-6a	
	Appendix 7-4		Introduction - page 3
			Section 3.1 b) - page 39
		Table 10 - page 37	
		Section 4.2 - page 53	
			Page 20 of the Culvert Flow Velocity Calculation Worksheets
		Appendix 1 of Appendix 7-4; Culvert Outlet Rip-rap Apron Flow Velocity Calculations	

Response: The UC 1 culvert is to be a 60 inch culvert. The text, tables, calculations, and plates have been changed to reflect this.

R645-301-R645-301-121.200-JDS, The Runoff Volume line in Table 11a indicates "8.73 acres*1.0l ac-in/12 in/ft": the notation "ac-in" is incorrect and confusing. The Permittee needs to replace "ac-in" with simply "in".)

Response: The "ac in" in Table 11a have been replaced with "in".

R645-301-R645-301-121.200-JDS, The 31.44 cfs value for Peak Flow (item 5) for Sediment Pond #1 Design in Table 11a is less than the total of the indicated component flows [26.58 cfs (disturbed watersheds reporting to Pond #1, Table 5) + 7.65 cfs (AU-5, footnote 2 of Table 11a) = 34.23 cfs], so how the Permittee determined a peak flow of 31.44 cfs is not clear. The

Permittee needs to clarify how this Peak Flow was calculated.

Response: The peak flow values contributing to the sediment pond have been corrected and justification of the peak flow value for Sediment Pond #1 has been provided (see Table 11a).

R645-301-121.300 -PWB, Both in hard copy and electronic versions of all future amendments must be provided as red-line/strike-out versions of the approved MRP, to facilitate Division review.

Hard copy and electronic versions of red line strike out have been submitted.

R645-301-232.100 -PHH, Topsoil Removal All topsoil will be removed as a separate layer from the area to be disturbed and segregated. The term "disturbed" includes construction process for conveyor support structures. A description of the method for removing subsoil will be provided in the permit application.

The subsoil is considered growth media and is treated as topsoil.

R645-301-232.100 -PWB As proposed, undisturbed acres represent approximately 26% of the disturbed area. Since, vegetation and soils of undisturbed lands will likely be subject to imact from fugitive dust and coal fines blowing from the increased coal stockpile acreage, and since the sol type to be impacted is DSH and XBS, having 18 and 12 inches of salvageable soils, respectively, the Division will require topsoil salvage from all acreage within the disturbed area boundary shown on Plate 1-2 , as required by R645-301-232.100, with the exception of soil types which may fall within the exclusion of R645-301-233.700.

The operator will monitor the currently undisturbed areas within the disturbed area for any contamination of any kind including construction or coal storage. If the monitoring reveals contamination of undisturbed areas, the operator will revise the approved MRP to allow for the removal of topsoil and designated those areas as disturbed.

R645-301-232.600 -PHH, Timing All materila to be removed (i.e., subsoil0 will be removed ... before drilling, blasting, mining, or other surface disturbances take place. This includes placement or disposal of mine development waste. The Permittee must use words defined in the R645 Coal mining Rules when

discussing disposal procedures for waste (whether mine development or coal processing), Refuse is generic and is not defined in the CMR's.

Appendix 7-4 has been rewritten using defined terms.

R645-301-232.710 and R645-301-121.200 PWB The application must clearly state, in the narrative, the acreage of rocky slope that are inaccessible to soil salvage, The Available Soil Resources Table in Section 232.100 lists 27.95 acres of topsoil salvage. The difference between the area to be disturbed (33.9 acres) and the area of soil salvage (27.95 acres) is 5.95 acres, which probably represents the acreage of rock slopes that are inaccessible to soil salvage. If so the application should clearly present this fact in the narrative.

Chapter 2 page 14 has been revised to state (approximately 5.95 acres).

R645-301-413.100, -532, 722.500-JDS, Sections 2.2 and 2.9, and Tables 1, 3, and 4 of Appendix 7-4 and Plates 7-2 and 7-5 identify UA-7 (the disturbed area around the upper ventilation fan) as undisturbed. There may be other sections of the plan containing the same inaccuracy. The Permittee needs to correct this wherever it occurs in the submittal.

Response: Area UA-7 was inadvertently labeled as undisturbed. The calculations in the appendices all show that this area was considered as disturbed. The new submission has been changed and watershed UA-7 has been changed to Fan Portal and is now listed in the disturbed sections of the tables. Also, Plates 7-2 and 7-5 have been changed to show the watershed as being disturbed also.

R645-301-420 PWB In accordance with the approved Air Quality Order DAQE-702-99 General Conditions #5 and 6, UEI must document the current status of communications with the DAQ concerning the increased acreage and tonnage of open coal stockpile and any potential revisions to DAQE-702-99. Communication with the DAQ should also describe the status of construction at the site.

Appendix 4-3 has been revised with the new air quality permit.

R645-301-511.100- PHH, Proposed Coal Mining Operations. The Permittee must provide a current 5 year Mine projection, as part of the Subsidence Monitoring

Plan.

Plate 5-5 with new 5 year projections has been updated and submitted.

R645-301-512.250- WHW The Permittee must have each map and cross-section in Appendix 5-4 certified by a registered professional engineer.

Maps and cross-sections in Appendix 5-4 have been certified.

R645-301-513.400, R645-301-528.320 PHH, Refuse Piles The division believes the Task ID#3017 application lacks clarity as far as disposal of mine wastes within the Mine's permit area. If the Permittee intends to place coal processing waste in any of the fill areas at the Lila Canyon mine, those areas must meet the R645 and 30 CFR requirements for refuse piles. The Permittee must realize that areas designated for permanent disposal of coal processing waste cannot be used for other mining related activities/facility construction.

Appendix 7-4 has been rewritten using defined terms. No coal processing waste generated at Lila will be stored in pad areas.

R645-301-521- PHH, General The Task ID#3017 plan must clearly state where the fill volume for the ROM coal stockpile pad will come from. Estimated cut and fill volumes (mass balance) must be provided for the entire Mine site.

A spreadsheet titled "Estimate" contains the cut fill volumes and locations. It will be placed at the end of Appendix 5-4.

R645-301-525.600, Compliance - PHH The Permittee must address the requirements of this regulation in the application. The Permittee must commit to notifying all surface landowners at least six months (June 2010) in advance of mining in order to meet the requirements of R645-301-525.600. This includes all governments agencies regardless of the agencies interaction with the Mine's permitting process.

Section R645-301-525.600 has been added to the submittal. This section makes the appropriate commitments.

R645-301-526.222 - PWB Deposition of coal fines onto undisturbed ground from the ROM storage pile will be visually monitored quarterly (Section 234.220 MRP part

B). The plan states that if monitoring reveals coa fine deposition, then a vacuum truck will clean up coal dust. This is unacceptable. The operations plan should not allow for deposition to accumulate to the point where a vacuum truck is warranted, rather, the plan should state that at the first sign of deposition on undisturbed ground, water sprays on the open stockpile will be warranted as per General condition #16 of the August 27, 1999 Approval Order 9DAQE-702-99). In addition, if deposition of coal fines is persistent, then additional measures should be considered to prevent further coal finds deposition on undisturbed ground (i.e. wind fence).

Older versions of the MRP did refer to vacuuming coal but the currently approved plan has been modified eliminating the reference to the unacceptable practice of vacuuming of coal fines.

R645-301-534.130, 534.300 - PHH, The Safety Factor Analyses for the rock slope access road and the Mine facilities road (Appendix 5-5,, Chapter 5) needs to be inserted into the Task ID #3017 application.

The Safety Factor Analyses can be found in Appendix 5-5, Chapter 5.

R645-301-534.140 - WHW The Permittee must show that all road embankments have a minimum safety factor of 1.3.

The Safety Factor Analyses can be found in Appendix 5-5, Chapter 5

R645-301-536 and R645-301-121.200 , and R645-100-WHW, The Permittee must use defined terms when referring to underground development waste. The term rock slope material is not defined and therefore can be confusing to the reader. In addition, the final disposal site for the underground development waste must be referred to as a refuse pile and not rock slope material.

Appendix 5-7has been rewritten for clarity using defined terms.

R645-301-536 and R645-301-536.110, and R645-301-121.200-WHW, The Permittee must update Appendix 5-7 and MRP. At a minimum, the Permittee must provide new slope stability calculations to demonstrate that the refuse pile will have a minimum safety factor of 1.3. In addition, the Permittee must also update all other sections of Appendix 5-7 that have changed because of the new location.

Appendix 5-7 has been revised and updated. Safety

factors are found in Appendix 5-5.

R645-301-536.510-JDS, The Permittee must provide reference to the sections of the Wildcat Loadout MRP that describe the management and reclamation of the Wildcat Refuse Pile.

The application has been rewritten indicating that any coal mine waste hauled from the mine site will be hauled to ECDC and not Wildcat.

R645-301-536.600, - 553-JDS, Section 553.250 states the refuse pile (rock slope disposal area) design is shown in Appendix 5-7, but Appendix 5-7 contains only a sketchy narrative of the proposed rock-slope underground development waste refuse pile construction and reclamation.

The rock slope material, defined by DOGM as "Underground Development Waste, this material is not considered refuse. The rock slope material, when tested has not demonstrated to be acid and toxic forming material. The material will not be treated any different than typical cut fill material. Should future testing indicate the material to be acid and toxic, then it will be treated as such.

The Permittee must provide mass balance accounting for the material to be redisturbed and recontoured from the refuse pile, coal stockpile, and bathhouse-office-parking pads at reclamation, especially the 28,000cyd of rock-slope underground development waste.

The mass balance for cuts and fills are shown on the spread sheet at the end of Appedix 5-4

Redisturbance of the soils covering the rock-slope underground development waste refuse pile, when the pads are Recontoured during reclamation, must be discussed.

Appendix 5-7 and 5-8 discusses the recontouring of the pads. The rock slope material (underground mine waste" is not toxic and does not have to be treated as such.

R645-301-553.250 - WHW, The permittee must show on the cross sections and profiles the final configuration of the site on cross section 13+00 and 14+00. The current cross sections show that underground development waste will be stored on the site during the operational phase but the cross sections show tat the underground development waste will be removed at reclamation.

Cross Sections 13+00 and 14+00 shows the operational phase in red. Within the rock slope material storage area is the rock slope material and pad fill material. As shown the pad is removed upon reclamation and the material is spread out reducing the height of the pad but increasing the ground elevation around the pad. The cross sections as they exist are accurate as far as practical.

R645-301-553.300 - WHW, The Permittee must provide information about how materials at the coal seam and the fan portal will be tested and handled for acid and toxic forming materials.

The material at the coal seam has been tested (test results found at the end of Appendix 6-2 and end of Appendix 2-3) and do not contain acid and toxic forming materials.

R645-301-553.350 and R645-301-121.200 - WHW, The Permittee must specifically state in Appendix 5-7 that the material in the temporary refuse pile will be stored on site not longer than a specific amount of time and in addition, once the specific amount of material has been place in the refuse pile the Permittee will ship the material off site.

Appendix 5-7 has been revised. Lila Canyon does not have a temporary refuse pile. The material on the pile on the coal pad is underground development waste. The temporary pile has been addressed in the revised Appendix 5-7.

R645-301-731.100 - PWB, The permittee outlines the testing of coal mine waste in Appendix 5-7. The Permittee will test all rock slope material three times, which translates to about one test per 9,000 cu yards. Previous permitting required five tests of rock the rock slope material or about one test every 5,000 cu yds. The division did not see a compelling reason to change the testing sequence and requests that the testing be described as previously agreed upon with five tests that take place as follows: during the initial start up, at the 1/4 mark, the ½ mark, the 3/4 mark and near completion of the rock slopes.

The testing schedule has been changed in Appendix 5-7 to revert back to the original proposal of testing five times.

R645-301-742.124-JDS, Table 8 shows expected flow from a l0-yr, 6-hr storm in ditch

DD-2c exceeds 5 fps, the criterion for lining a ditch with rip-rap, yet Table 8 indicates this ditch is not planned to be rip-rapped. The Permittee must resolve this discrepancy.

Response: Table 8 has been changed to show that Ditch DD-2c will be lined with 6" D_{50} rip-rap.

R645-301-742.330-JDS, From Sedimentation Pond #2, both spillways will report to an unnamed 24 in CMP culvert that will discharge to the Middle Fork of Lila Canyon. The Permittee must identify this culvert, show it on appropriate maps, and present design specifications and calculations similar to those provided for the other culverts.

Response: The design for the spillway culvert is presented in Table 9 and shown on Plate 7-5. Calculations are presented in the Culvert Sizing Calculations.

R645-301-742.332-JDS, The Permittee needs to include an updated Figure 3 in Appendix 7-4 (along with other Figures). Figure 3 tabulates ditch flow depth and area based on a 10-yr, 24-hr storm. The currently approved Figure 3 is out-of date: it does not include all the proposed ditches and values shown do not agree with those in Table 8 of the current submittal.

Response: Due to the number of ditches, Figure 3 has been modified to show the typical channel shape and the ditch sizes are presented in Table 8.

R645-301-830.200-WHW The Permittee must increase the bond for the Lila Canyon Extension project by a minimum of $2,306,000. In addition, the Permittee must include updated reclamation costs estimates into the MRP. The Division will provide the Permittee with a copy in either electronic or paper copy.

The Old Horse Canyon Portals have been included in the bond calculations. The increase in the bond due to the surface changes is less than 10% of the total bond and is covered in contingencies. Should the Division decide that the bond needs to be increased the increase should only be $176,000 which it make the bond total, for Lila Canyon, $1,862,000.

Mid Term Deficiencies

R645-301-112, Ownership and Control information for Murray Energy Holdigs, Inc. Should be incorporated into the MRP at this time in the Salt Lake Copy of the MRP.

The organizational chart in Appendix 1-1 has been updated to include Murray Energy Holdings, Inc.

R645-301-113.300, In conjunction with the detailed design change amendment to the MRP (Task 3017), please update Appendix 1-3 to include the violation records for all affiliates during the years 2007 and 2008.

Appendix 1-3 has been revised for this submittal.

R645-301-322, The permittee must amend the MRP, Part B Appendix 7-3, page 19-22 to indicate that UEI is aware that regardless of state appropriated water rights held by the Permittee, any water consumption over 100 acre-feet per year is subject to a per acre-foot fee payable to the USFWS, And, that the actual water consumption reported in the annual report once mining operations have commenced, might be subject to a Section 7 consultation with the USFWS.

The text in Appendix 7-3 has been revised to reflect the statement above.

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Phase	Begin	Complete
Mining Pad, Support Structures, and Portals		June 2005 Dec. 2005
Begin Underground work	June 2005	
Terminate Mining	Dec. 2019	

Reclamation operation dates can be found in Table 3-3.

Approximately 5,992.07 surface acres, which include federal, state and private lands are included within the permit area. These surface acres are described in Table 4-2, and coal acres are shown on Table 4-2A.

The perimeter of the disturbed area contains approximately 42.6 surface acres within the disturbed area but only ~~25~~33.~~39~~ acres will be disturbed leaving ~~17.3~~8.7 acres of undisturbed islands within the disturbed area.

116.200. The initial permit application is for a five year term with anticipated successive five year permit renewals.

116.210 Since the initial permit application is for a term of five years this section does not apply.

116.220 Since the initial permit application is for a term of five years this section does not apply.

117. Insurance, Proof of Publication and Facilities or Structures Used in Common

117.100. The Certificate of Liability Insurance is included as Appendix 8-2.

117.200. A copy of the newspaper advertisement of the permit extension and proof of publication can be found in Appendix 1-5.

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232. Topsoil and Subsoil Removal

232.100 Prior to topsoil removal, eight five gallon buckets of screened 1/4" cryptobiotic soil will be recovered and stored in a cool dry place for redistribution on the topsoil pile. Topsoil material will be removed from those areas of the mine yard where material will be excavated in order to achieve final yard configuration and which have been identified as suitable topsoil for reclamation based on the soil survey. This includes the access road to and around the topsoil pile. This material will be used to construct a berm around the topsoil pile.

The following volumes represent soil resources that may be available for salvage, storage and subsequent redistribution during reclamation. The actual amount salvaged will be reported to DOGM following topsoil removal and stockpiling operations.

AVAILABLE SOIL RESOURCES

Map Unit	Potential Salvage Depth In.	Potential Acres	Potential Estimated Volume YD3	Actual Salvage Depth In.	Actual Salvaged Acres	Actual Salvaged Top Soil YD3
SBG	48	11.83	76343	18	11.~~2561~~	~~2687328100~~
VBJ	30	9.62	38801	18	3.4~~510~~	~~95268227~~
XBS	12	12.09	19505	12	~~4.78735~~18.8 1	14207
DSH	40	1.56	8389	18	1.~~40329~~16	2809
RBL	8	9.34	10046	8	2.~~59~~17	~~27092~~340
RBT	6	3.79	3057	6	0.~~77~~56	4~~86~~50
TOTAL[2]		48.23	156141		~~25.30~~27.9 5	~~5023656~~133
Bank to Loose Cubic Yards *1.18 (Amount topsoil pile is designed to hold.)						[1] ~~59278~~66237

(1) An additional 800 yd^3 will come from the access road around the topsoil pile. This material will be placed in the berm around the topsoil pile.
(2) The 48.23 acres was taken from a soil survey and does not accurately reflect the operators intention to include 42.6 acres of disturbance within the disturbed area boundary.

The actual topsoil salvage will consist of removing a surface

layer up to 18 inches thick over the disturbed area. If shale is encountered within 18 inches only the soil above the shale will be salvaged. (Plate 2-3). This would cover about 2534 acres where soil would be salvaged and stored in the topsoil stockpile.

Total volumes of soil stored in the topsoil pile would be approximately 506,000 bank cubic yards. Removal of stones and boulders would be considered in volume estimates where they are part of the soil layer removed.

The stockpile has been sized to allow for bulking or swell of the soil as it is removed from the bank state to the loose state. A bulking number of 1.18 has been used. The area allowed for topsoil storage is 506,000 bank cubic yards x 1.18 which equals 606,000 loose cubic yards to be placed on the topsoil pile.

Boulders of approximately three feet in diameter and larger will be separated from the topsoil and piled or placed at appropriate locations such as adjacent to roads, pads etc. No attempt will be made to collect the large boulders into common piles. Boulders above ground level are in addition to topsoil volumes and may account for approximately 10,000 cubic yards.

UEI is not stockpiling large stones "boulders". Boulders will be pushed to the side and left during construction and then upon reclamation the boulders will be pushed back into the approximate location form which they came. Rocks of 36" or less will be stored in the topsoil pile with the soil and will be redistributed with the soil.

The approximate 606,000 loose cubic yards of topsoil will be stored in a topsoil pile as shown on Plate 5-2. This topsoil pile will be approximately 246'350' long and 146'250' wide with 2:1 slopes. The height of topsoil pile needed is approximately 2631 feet. The pile as designed has the capability of storing well over the required 60,000 cubic yards. See Figure 1 for topsoil pile calculations.

Soil from the proposed exhaust fan site near the coal outcrop

Lila Canyon Topsoil Calculations

Pile Elevation In Feet	Pile Length In Feet	Pile Width In Feet	Volume L X W CYDS	Volume Ends CYDS	Total Volume Cumulative Cubic Yards
	350	250	3240.74		3240.74
1	346	246	3152.44	22.07	6415.26
2	342	242	3065.33	21.78	9502.37
3	338	238	2979.41	21.48	12503.26
4	334	234	2894.67	21.19	15419.11
5	330	230	2811.11	20.89	18251.11
6	326	226	2728.74	20.59	21000.44
7	322	222	2647.56	20.30	23668.30
8	318	218	2567.56	20.00	26255.85
9	314	214	2488.74	19.70	28764.30
10	310	210	2411.11	19.41	31194.81
11	306	206	2334.67	19.11	33548.59
12	302	202	2259.41	18.81	35826.81
13	298	198	2185.33	18.52	38030.67
14	294	194	2112.44	18.22	40161.33
15	290	190	2040.74	17.93	42220.00
16	286	186	1970.22	17.63	44207.85
17	282	182	1900.89	17.33	46126.07
18	278	178	1832.74	17.04	47975.85
19	274	174	1765.78	16.74	49758.37
20	270	170	1700.00	16.44	51474.81
21	266	166	1635.41	16.15	53126.37
22	262	162	1572.00	15.85	54714.22
23	258	158	1509.78	15.56	56239.56
24	254	154	1448.74	15.26	57703.56
25	250	150	1388.89	14.96	59107.41
26	246	146	1330.22	14.67	60452.30
27	242	142	1272.74	14.37	61739.41
28	238	138	1216.44	14.07	62969.93
29	234	134	1161.33	13.78	64145.04
30	230	130	1107.41	13.48	65265.93
31	226	126	1054.67	13.19	66333.78
32	222	122	1003.11	12.89	67349.78
33	218	118	952.74	12.59	68315.11
34	214	114	903.56	12.30	69230.96
35	210	110	855.56	12.00	70098.52

Figure 1

Precautions will be taken to avoid contamination. In the unlikely event visual observations indicate that subsoil has become contaminated from oil and grease, salts, or other visual contaminates, the contaminated soil will be disposed of at a sanitary landfill site (probably East Carbon).

232.600. Topsoil will be removed from excavation areas and stockpiled prior to construction activity. Vegetation and boulders that might interfere with topsoil salvage will be removed prior to removal and stockpiling of the topsoil.

232.700. It is anticipated that topsoil can be salvaged on areas to be disturbed. Approximate thickness of subsoil by Soil Map Unit are: SBG - 30 inches, DSH - 22 inches, and VBJ - 12 inches.

232.710. Soil removal from some local sites may be difficult due to rockiness and steep slopes. The area between the rock slopes and the ROM coal stockpile is an area of concern. In the area between the rock slopes and ROM coal stockpile the disturbance is minimal. The topsoil will not be removed from this area due to steep slopes. To protect this area from coal contamination the conveyor will be enclosed. Jersey Barriers will be installed to prevent the coal stockpile from encroaching this area. Topsoil will be removed in all areas of disturbance except for the area between the ROM coal pile and the rock slopes where either one or two bents will be constructed. Available underlying soils will be salvaged from stony disturbed areas. Areas too steep and rocky for equipment and where it would be unsafe or impractical for construction activities (approximately 5.95 Acres) will not be included in the site development plan.

232.720. No substitute soil materials will be needed.

233. Topsoil Substitutes and Supplements.

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into the annual safety training for all employees.

4. Possible restrictions on firearms on the mine site, and restrictions on off road vehicle usage to lesson disturbance.

5. The Operator will ensure that DWR surveys for cliff nesting raptors within proposed facilities areas at least two years prior and one year following construction. The Operator will conduct annual raptor surveys.

   As part of normal mining operation requirements, the Permittee must submit all results of the raptor ~~fly-over~~ surveys to the Division in Annual Reports and must immediately contact the Division, BLM, and USFWS following any raptor survey that shows that eagles are tending nests or nesting. The agencies will immediately coordinate to determine if the Permittee must implement appropriate measures. If the agencies recommend mitigation, the Permittee must submit all plans to the Division for incorporation into Appendix 3 of the MRP.

6. An active golden eagle nest, with young, was documented during the 1999 spring raptor survey. The nest is located in the left fork of Lila Canyon within the 1-mile buffer zone. (See Plate 3-1). A consultation with USF&W, BLM, and UDWR was held in the fall of 1999. Line of site and potential mitigation was addressed during this meeting. The results of this consultation are addressed in Sec 322.220 and the Lila Canyon EA. This nest was not active in 2000, 2001, 2002, or 2003. A survey was not done in 2004. In 2005 nest 946 contained a possibly dead chick. (See Appendix 3-5 for updated inventories)

7. The Operator will adhere to exclusionary periods when initiating construction and final reclamation projects. The exclusionary periods include: raptors (Feb 1 - July 15), Bighorn sheep lambing

(May 1 - June 15), and Pronghorn (May15 - June 20).

In the event of unforeseen changes in construction or mine plans, or in the case of emergency situations that may force the Permittee to conduct activity near or within the 0.5 mile buffer zone of raptor nest and during raptor exclusionary periods (February 1 to July 15 for golden eagles), the Permittee will immediately contact the Division, BLM, DWR, and USFWS. The agencies will immediately coordinate to determine appropriate measures that may include conducting ground surveys, in coordination with DWR, to determine if birds are tending nests or nesting and possibly determine the life stage of the offspring; developing a mitigation plan, in coordination with the agencies, for possible impacts to nests or birds; or ceasing operations until the end of breeding season to avoid 'take'. If the agencies recommend surveys, the Permittee must submit all survey results to the Division in Annual Reports. If the agencies recommend mitigation, the Permittee must submit all mitigation plans to the Division for incorporation into Appendix 3 of the MRP.

The Applicant does not plan to monitor any wildlife species during the life of the operation with the exception of raptors. ~~Helicopter s~~Spring raptor surveys will be conducted at a minimum of a 1-mile radius around any new or potentially disruptive mining activity, 2-years prior and annually after the proposed activity. The Operator will contact the USFWS and the Division immediately following raptor ~~fly-over s~~surveys if raptors are observed tending nests or nesting.

The mine will emphasize their commitment to legal requirements of firearm and off-road vehicle-use by employees. This type of program has been adopted by the operator and will continue throughout the operation. An education program aimed at minimizing potential negative impacts by employees will be presented

Prior to any new surface disturbance a raptor inventory will be conducted to ensure that no raptors or their nests or young would be adversely impacted through any mining or mine related activity. A copy of historical raptor data as well as current survey results are attached as Appendix 3-5.

A one-half mile buffer zone of no new disturbance during critical nesting periods will be maintained during that portion of the year that the nest sites are active.

As part of normal mining operation requirements, the Permittee must submit all results of the raptor ~~fly-over~~ surveys to the Division in Annual Reports and must immediately contact the Division, BLM, and USFWS following any raptor survey that shows that eagles are tending nests or nesting. The agencies will immediately coordinate to determine if the Permittee must implement appropriate measures. If the agencies recommend mitigation, the Permittee must submit all plans to the Division for incorporation into Appendix 3 of the MRP.

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Top Soil removal / Actual Disturbance:

~~2533~~.~~386~~ Acres discussed in Section 232.100" This is the actual area anticipated to be disturbed for the life of the mine.

The permit area for the Lila Canyon mine is depicted on Plate 4-1. Included in this map are: the boundary of the permit area, the area which will include surface facilities, and the new portals. Existing roads, power lines, and railroads are identified. Private, federal, and state ownership are also identified on this plate. Wildlife habitats have been identified on Plate 3-1 and grazing allotment boundaries are depicted on Plate 4-2.

Table 4-1 lists the various owners of land within and around the permit area. The permit area is approximately 5992.07 acres. Within the permit area, 1446.64 acres comprise private land and 289.06 acres comprise state lands. The remaining 4,256.37 acres is federal land owned and managed by the United States Bureau of Land Management (BLM). Table 4-2 describes the surface ownership and Table 4-2A describes the coal ownership of the permit and surrounding area.

Lila Canyon lies within a region identified by the BLM as the Range Valley Mountain Habitat Management Plan Area (U-6-WHA-T4). This region was designated as such by a technical committee comprising state, federal, local government agencies and private citizens. This Habitat Management Plan area was established in September 1991 to provide management for the wildlife species of the area, including federally protected wildlife and plant species, big game, upland and small game waterfowl, unique and limited high value wildlife habitat, and access management. Big game and raptor habitat within the Lila Canyon Mine permit area, along with the Range Valley Mountain HMA, have been identified on Plate 3-1.

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12) 60-inch Conveyor from tunnels to Coal Stockpile
13) (ROM) Underground Belt from Stockpile to Crusher
14) 48-inch Conveyor from Crusher to Loadout Bin
15) ~~48-inch Conveyor~~Drop from Loadout Bin to Truck Loadout
16) Reclaim Tunnel, Escape Tunnel, Fan and Fan House
17) ROM Storage Pile, Coal Stacking Tube
18) Crusher Screen Plant
19) Truck Scale and Loadout
20) Coal Loadout Storage Bin
21) Guardrails
22) Underground Pipes
23) Chain Link Fence

Support Facilities

24) Non-Coal Waste Area
25) Equipment & Supplies Storage Area
26) Topsoil Pile
27) Refuse Pile
28) Sediment Pond
29) Slope Access Road / Portal Access Road
30) Rock Slopes
31) Mine Facilities Road / Truck Loadout Road
32) Office/Bathhouse/Warehouse Asphalt Parking Area
33) Mine Parking
34) Fuel Tanks
35) Powder and Cap Magazines
36) Culvert locations are shown on Plate 7-2.
~~37) Coal pile Road (Slope between the coal pile road and the portal access road will be evaluated after road construction and be labeled either disturbed or undisturbed, as appropriate, on an As-Built site map.~~

A description of new structures and facilities ~~follows~~:

~~Office/Bathhouse~~ Office/Bathouse

The office and bathhouse building is shown on Plate 5-2. This building will jointly house all support personnel such as accounting, administration, engineering, and safety and will provide a comfortable office environment for all employees. Bathhouse and toilet facilities will be found for all employees at this location. The bathhouse will proved for a location for underground miners to change from clean street clothes to clothing suitable

for underground use. The area will proved showers for employees for use after their scheduled work shifts so they can cleanup prior to returning home. Both the bathhouse and office buildings will be of prefab construction and will rest on a concrete pad. The pad dimensions will be approximately 150' by 100' by 12". The facility will be designed to accommodate up to ~~145~~200 employees working rotating shifts.

Shop Warehouse

The shop warehouse building is shown on plate 5-2. Parts and supplies consumed during the mining process will be stored in the warehouse to be issued as needed. The shop area will be used to perform minor equipment repairs and overhauls. The shop warehouse will be a prefab modular type building approximately 100' by 150' and will rest on a 4" concrete pad.

Security Shack

The Security Shack shown of Plate 5-2, when used will provide security to the mine site. The security shack will be used primarily at times when the mine is not in production. Security may be provided to protect the public from hazards associated with a mine site and to protect company property from unauthorized use. The security shack will be approximately 10' by 20' by 8'` and will be of prefab construction and will rest on a 4" concrete slab.

Mine Substation

The mine substation will be located as shown on Plate 5-2 will proved power to surface and underground areas of the mine property. The substation will comprise of approximately four transformers setting on a concrete pad approximately 20' by 20' by 12" and fully fenced. The total area of the substation is approximately 40' by 40'. Power will be fed into the transformers at 46 KVA and will be transformed down to usage voltages for both the surface and underground facilities. It is anticipated that voltages of 110, 220, 440 will be used on the surface and 12,470 volts will be utilized underground. The mine substation will be constructed in a way to fulfill all appropriate MSHA regulations.

Underground Power Lines

Within the disturbed area it is anticipated all power lines will be

underground. Underground lines will be run where feasible. As builds will be provided. Underground Power Lines will be left in place upon reclamation.

Water Treatment Plant

The water treatment plant is located on the north-east side of the surface facility area. The plant will rest on a 15' by 15' slab. Process water will flow through the treatment plant at which time it will be treated and made suitable for potable water uses. The potable water will be stored in the potable water tank until it is used. The location of the water treatment plant can be found on Plate 5-2.

Potable Water Tank

Water treated by the water treatment plant and intended to be used as potable water will be stored in this 15' diameter by 20' high tank. The tank will set on a 15' by 15' concrete pad designed for adequate support of the tank. The location of the potable water tank can be found on Plate 5-2.

Process Water Tank

Process water, water to be used for mine use or to be treated for potable use, will be stored in this tank. The 15' diameter by 20' high process water tank will rest on a 15' by 15' concrete pad. Process water tank will be filled by using mine discharge water or may be hauled in from off site. The location of the process water tank can be found on Plate 5-2.

Sewer Tank

The sewer tank has been designed to facilitate ~~145~~200 employees working on rotating shifts. The sewer tank will be located under the south end of the office and bathhouse parking area. The location of the sewer tank can be found on Plate 5-2. The design for the Sewer Tank can be found in Appendix 5-4.

Drain Field

The drain field has been designed to facilitate ~~145~~200 employees working on rotating shifts The drain field will be located at a lower elevation and south of the sewer tank. The location of the drain field can be found on Plate 5-2. The design for the drain field can be found in Appendix 5-4.

Ventilation Fan

The ventilation fan will be accessed and installed from underground. The ventilation portal will be driven from underground and broken from inside out. The location of the portal and fan is shown on Plate 5-2. Fan power will be run underground. Fan access for maintenance and monitoring will be from the underground works. The need for surface fan access is not anticipated at this time, access will be from underground.

60-inch Conveyor from tunnels to Coal Stockpile(Main Conveyor)

The Run of Mine underground belt will provide for a means for coal to be conveyed from the working faces to the run of mine coal storage pile on the surface. The belt will provide capacity to convey to the surface, all coal mined in the underground workings. Preliminary design suggests that the conveyor that extends from the bottom of the rock slopes to the stacking tube at the coal storage area, shown on Plates 5-2 and 5-8, will have the following specifications: 60" wide, speed approximately 700 fpm with a length of approximately ~~320~~810 feet long. Since the ground beneath the conveyor will not be disturbed due to the steepness and remoteness of the area, this conveyor will be completely contained within a tube type structure.

(ROM) Underground Belt from Stockpile to ~~Crusher~~Crusher/ Screen

The Reclaim conveyor will provide for a means for coal to be conveyed from the coal stockpile to the crusher. The belt will provide capacity to convey to the screen and crusher at a ~~rate~~ suitable rate for crushing and screening. Preliminary design suggests that the reclaim conveyor, shown on Plates 5-2 and 5-8, will have the following specifications: ~~48~~60" wide, speed approximately ~~500~~700 fpm with a length of approximately ~~280~~670 feet long. The portions of the conveyor running on the surface will be covered.

~~48~~60-inch Conveyor from Crusher to Loadout Bin

The Loadout conveyor will provide for a means for coal to be conveyed from the crusher to the loadout bin. The belt will provide capacity to convey to the loadout at the same rate as the Reclaim conveyor. Preliminary design suggests that the Loadout conveyor, shown on Plates 5-2 and 5-8, will have the following specifications: ~~48~~60" wide, speed approximately 500 fpm with a length of approximately 2~~1~~30 feet long. The portions of the conveyor running on the surface will be covered.

~~48-inch Conveyor~~Drop from Loadout Bin to Truck Loadout

~~The Truck conveyor~~Coal will ~~provide for a means for coal to~~ be ~~conveyed~~dropped from the loadout bin to the trucks being loaded. The ~~belt~~drop rate will provide capacity ~~to convey t~~o the trucks at a rate suitable for truck loading. ~~Preliminary design suggests that the truck conveyor, shown on Plates 5-2 and 5-8, will have the following specifications: 48" wide, speed will vary with a length of approximately 50 feet long. The portions of the conveyor running on the surface will be covered.~~

Reclaim Tunnel, Escape Tunnel, Fans

Design for the escape and reclaim tunnels is not complete. Standard practice is to construct the tunnels from either concrete or corrugated metal. The reclaim tunnel is approximately ~~275'~~350' long with a 14' diameter. The escape tunnel will be approximately ~~100'~~300' long with a diameter of 4'. Appropriate safety and environmental concerns will be addressed upon detailed design. The preliminary layout is shown on Plates 5-2 and 5-8.

ROM Storage Pile

The run of mine storage pile receives coal directly from the underground works and provides storage for the coal until it is crushed and loaded into trucks for transportation to a unit train loadout. The coal from the underground run of mine belt will be dropped into a stacking tube located in the center of the run of mine storage pile. This tube will help reduce any fugitive dust. The stacking tube will be approximately 80' high and will allow for approximately 2~~7~~00,000 tons of open storage in the run of mine storage pile. The run of mine storage pile is shown on Plates 5-2 and 5-8.

Crusher

The enclosed crusher will crush coal from the 8" minus down to a 2" minus size, at the rate of approximately ~~500~~1000 tons per hour. ~~No screening is anticipated at this time~~The coal will be first screened then the oversized will be crushed. ~~The c~~Crushed coal will ~~leave the crusher and~~ be stored temporarily in a 500 ton storage bin located ~~at~~above the truck loadout. The crusher and screen location ~~is~~s are shown in Plates 5-2 and 5-8.

Coal Storage Bin

The coal storage bin is part of the truck loadout and is shown of Plate 5-2. The coal storage bin is where crushed coal is stored waiting to be loaded into coal haul trucks. The bin provides for surge capacity and allows for better control of crushing time. The coal storage bin provides for a enclosed dry location for temporary crushed coal storage. Coal is delivered from the crusher to the coal storage bin by use of a ~~48~~60" covered surface conveyor running at a speed of approximately ~~500~~700 FPM. The preliminary layout is shown on Plates 5-2 and 5-8.

Coal Stacking Tube.

The final design for the coal stacking tube is not yet complete. Preliminary design indicates that the stacking tube will be approximately 15' Diameter and approximately 80 feet high. Standard practice is to construct the tube of either concrete or steel. The preliminary layout is shown on Plates 5-2 and 5-8.

Culverts

A complete list and design for the culverts can be found in Appendix 7-4 Tables 9 and 10, and are shown on Plate 7-2. A summary of the culverts follows:

		Culvert	Length	~~Width~~
~~DC-5~~	~~40'~~	~~18"~~		
~~DC-6~~	~~60'~~	~~24"~~		
~~DC-7~~	~~40'~~	~~24"~~		
~~DC-8~~	~~40'~~	~~18"~~		
~~DC-9~~	~~40'~~	~~18"~~		
~~UC-1~~	~~530'~~Size			
DC-1	30'	18"		
DC-2	65'	18"		
DC-3	33'	18"		
DC-4	135'	18"		
DC-5	50'	18"		
DC-6	80'	24"		
DC-7	110'	18"		
DC-8	85'	24"		
DC-9	35'	18"		

DC-10	55'	18"
DC-11	65'	18"
DC-12	50'	18"
DC-13	30'	24"
DC-14	60'	18"
DC-15	60'	18"
DC-16	60'	18"
DC-17	75'	18"
DC-18	35'	18"
DC-19	40'	18"
UC-1	480'	60"

Guard Rails

Approximately 1,520 feet of Guard rails will be installed on the mine access road according to the detailed engineering plan being prepared. Appropriate MSHA and UDOT requirements will be taken into consideration.

Underground Pipes

Locations of the underground pipes have yet to be determined. Once detailed engineering design is completed the underground pipes will be added to Plate 5-2 or other appropriate Plates. Under ground pipes will be left in place upon reclamation.

Chain Link Fence

Approximately 1,500' of a six foot high chain link fence will be constructed as shown on Plate 5-2. The fence will be constructed to protect the public, and proved security along the section of county road that runs adjacent to the property.

Non-Coal Waste Area

An area for non-coal waste has been identified on Plate 5-2. Non-coal waste such as papers, timbers, cans, and miscellaneous scrap that is brought to the surface will be disposed of in a metal bin or "dumpster" located in the non-coal waste area identified on Plate 5-2. Metal will be separated from other forms of trash for salvage. Material not salvageable will be transported to the East Carbon Development Corporation (ECDC)

dump or other approved disposal site for permanent disposal. Once a dumpster has reached capacity, the full dumpster will be replaced with an empty dumpster, and then the full dumpster will be hauled by a contract hauler to the specified disposal site.

Equipment & Supplies Storage Area

The equipment and supply storage area is approximately 350' by 400'. This storage area will be used to store mine supplies and equipment from the time of delivery until they are needed underground. Supplies such as timbers, bolts, plates, rock-dust, pipes, resin, screens, concrete blocks, steel, cables, and numerous other materials may be stored in this area. Equipment both new and used will be stored in this area. Many various longwall pieces such as shields, pan-lines, shears, chains, head and or tail drives, transformers, belt drives, pumps and numerous other material will be stored in this storage area. This secure area provides for a good storage area for diesel, gasoline, hydraulic, and roadway chemicals. All oil tanks will have appropriately designed berms or retaining walls. The equipment and supplies storage area is shown on Plate 5-2. Any explosives will be stored here according to appropriate MSHA regulations. Rock dust bins will be located in this area.

Topsoil Pile

The topsoil pile has been located on the south west end of the surface facilities. The pile has been designed to contain adequate topsoil for redistribution according to the reclamation plan found in Chapter 5. The proposed location provides for good protection from wind contamination as well as protection from mine related activities. The location of the topsoil pile is shown on Plate 5-2.

~~Refuse~~Mine Development Waste Pile

~~The refuse pile~~A temporary mine development waste area has been designed to provide a location for the storage of underground development waste that is brought to the surface ~~and for any excess slope rock which will be generated and not used as fill. The capacity of the pile is designed for approximately 44,400 yd3 which is in excess of projected needs. The refuse pile design is shown in Appendix 5-7 and shown on Plate 5-2. The areas for the rock slope material and for~~. Any underground development waste ~~are~~

~~adjacent and conjoining and will be treated as one area or structure~~, other than rock slope material, will be placed in the temporary pile then transported to an approved disposal site. The rock slope material will be used as fill as per Appendix 5-7. The capacity of the temporary pile will only be a few hundred tons. The area for the rock slope material is shown on Plate 5-2.

Sediment Pond

The sediment pond has been design to provide for adequate sediment protection for the project area. All water running off the disturbed area will be routed into the sediment pond for treatment. The sediment pond has been designed according to the appropriate R645 regulations and the designs can be found in Appendix 7-4 and Plate 7-6. Because the sediment pond does not fit into the requirement of 30 CFR 77.216(a) an MSHA number for the proposed pond is not required. The sediment pond is located on the south-west end of the property and shown on Plate 5-2.

Slope Access / Portal Access Road

The slope access road splits off the facility access road near the north-east corner of the equipment and supply storage area, and follows an alignment that takes into consideration grade and direct access. The slope access road will be used to provide access to the rock slopes which in-turn proved access to the underground workings. The slope access road will be used as access for all men, material and equipment need in the mine. Since the slope access road provides for frequent access for men, equipment and materials for a period of six months or longer the slope access road is classified as a primary road and will be paved. The slope access road will be designed, constructed, and maintained according to appropriate R645 regulations. The slope access road is shown on Plate 5-2.

Rock Slopes

Access to the underground workings of the Lila Canyon Mine will be provide by two rock slopes driven from the top of the Mancos shale up-dip to the intersection of the coal seam. One portal will proved for access for men, equipment and material to the mine. The second access slope will contain the run of mine belt line from the underground workings of the mine to the run of mine stock pile. There is a possibility that only one larger slope will be driven and then divided. to provide for two separate entries. The two 1,227 foot long slopes will slope up at approximately 12%, from a starting elevation

of approximately 6150'. The intersection of the coal seam and the rock slope will take place at approximately 6,300 feet elevation. The length of the slopes were minimized by taking advantage of the coal seam dip which is approximately 12% to the east. The rock material removed from the slopes will be used as fill material for the surface facilities. The rock slope material / underground development waste will contain mostly shale, sandstone and mudstone. Traces of coal may be found but the amount will be insignificant. There are no known coal seams or significant rider seams found below the Sunnyside Seam in the Lila Canyon Portal Area. The rock slope locations are shown on Plate 5-2.

Mine Facilities Road / Truck Loadout Road

The mine facility road shown on Plate 5-2 begins at the edge of County Road 164 and allows for access to the various surface facilities. The road has been located in the most practical location taking into consideration grade, stability, and alignment. Employees will use this road to access the office & bathhouse facilities. Coal haul trucks will use this road to access the scales and truck loadout. All supplies will be hauled on a short portion of this road from the supply storage area to the slope access road. The road will be paved during construction of the facilities and before coal ming operations begin in order to to minimize dust and provide good surface for heavy truck traffic as well as facility access. The facility access road will be approximately 24' wide to provide for two lane traffic and will have the appropriate drainage controls to insure long term life and low maintenance. The has been constructed and will be maintained according to the appropriate R645-534 and R645-527 regulations.

~~Coal Pile Road~~

~~The Coal Pile Road is shown on plate 5-2. The Coal Pile Road will be 15' wide and will follow the existing contours approximately 400' from the Portal Access Road to the ROM coal pile. A typical cross section similar to the ancillary road can be found in Appendix 5-4 (Figure 1).~~

~~Office/Bathhouse/Warehouse~~Office/Bathhouse/Visitor Parking Area

Parking will be as shown on Plate 5-2. Parking facilities for office,

mine, and warehouse employees will be provided jointly as shown. This area will also provide parking for all vendors, and visitors. The surface of the ~~150'~~220' by ~~475'~~350' area will ~~initially be graded and graveled but may eventually~~ be paved. The parking area is located and designed to allow for convenient and safe parking of personal vehicles. The sewer tank and drain field will be located on the ~~south~~north end of this parking area.

Mine Parking

A mine parking area will be provided as shown on Plate 5-2. The mine parking area is where all mine and mine related mobile equipment will be parked when on the surface. This is the location where the underground work crews will be loaded into man trips for transportation to the various work areas. The mine parking area will ~~initially be graded and graveled but~~

~~eventually may~~ be paved. The mine parking area will be approximately ~~100'~~70' by 2~~0~~20'.

Fuel Tanks

Fuel tanks will be located in the Equipment & Supplies Storage Area and be installed as discussed under Equipment & Supplies Storage Area. A 1,500 gallon diesel tank, 500 gallon hydraulic tank and a 500 gallon gasoline tank will be needed.

Powder and Cap Magazines

Powder and cap magazines will be mobile temporary, and supplied by the explosive distributer. Upon reclamation the powder and cap magazines will be returned to the distributer.

As per the approved Air Quality Order ~~haul~~all roads will be paved and ~~unpaved roads and~~the pad areas used by mobile equipment will be treated with water or dust suppressant, open stockpiles will be watered as conditions warrant.

521. Included in this section are maps, cross sections, narratives, descriptions and calculations used to satisfy the relevant requirements. This section describes and identifies the lands subject to coal mining and reclamation operations covering the estimated life of the project.

521.100 This application includes the cross sections, maps and plans needed to present the relevant information required by the Division. This information includes the following:

521.110. Plate 5-1 Shows area previously mined and approximate dates of mining.

521.111 Plate 5-1 of part 'B" and 2-2 of part "A" shows the location and extent of known workings of inactive, or abandoned underground mines. The surface portals or mine openings to the surface are shown. Plates 5-1 and 2-2 of part "A" have been prepared and certified by or under the direction of a registered professional engineer.

Doelling lists several coal mines and mining

523. Mining Methods:

Mining will begin in Section 15, T16S, R14E, in the Sunnyside seam. Development of the Sunnyside seam will be in a down dip direction toward the east. The seam will be accessed by two 1,200 foot slopes driven up at 12% from the base of the cliffs.

Production during the first year is estimated to be 200,000 tons, the second through the fifth year production should be between 1,000,000 and 1,500,000 using continuous mining methods. If and when tonnage demand increases to justify longwall mining, production could peak as high as 4,500,000 tons a year and continue at that level for the life of the mine.

Mine production will begin with the slope construction. Once the coal is encountered development will continue using continuous miners and various haulage types. Battery, cable, or continuous haulage may be used in conjunction with continuous miners in development. Continuous miners will account for all the production during the first two to five years. Mining will consist of driving mains, developing room and pillar panels and gate entries for future longwall mining.

The majority of the second mining will be performed using longwall equipment. However, in isolated areas room and pillar type of mining may be used in areas not suitable for longwall mining. Longwall panels are sited approximately parallel lengthwise to the strike with a slight up dip orientation to provide drainage for the development faces. This practice will be applied to the continuous miner panels wherever possible. (See plate 5-5)

Roof control and ventilation plans will be submitted to MSHA and approved prior to any underground mining activities.

An air quality permit from the State Division of Air Quality has been obtained and will be modified as needed.

Ventilation of the mine will be by an exhaust and or blowing type system. It has been estimated that 900,000 cfm will be required at full production. Intake air will be supplied by slopes and entries from the surface.

A water supply system will be installed. Potable water from an approved source will be hauled by truck and stored in a mine site storage tank located near the man and coal slope portals. Alternative sources for potable water are being considered. A treatment plant may be indicated. Process water will

value or reasonable foreseeable use of the surface.

525.460. Anticipated effects of planned subsidence may include tension cracks, fissures, or sink holes. Areas of minimal ground lowering may be anticipated. The chances of subsidence-related damage to any perceived renewable resource is minimal.

525.470. Since no urbanized areas, cities, towns, public buildings, facilities, churches, schools, or hospitals exist within the permit area this section does not apply.

525.480. There are no plans to change or modify the mining plan to protect any springs or seeps. Springs with water rights will be monitored for flow and quality as described in Chapter 7 Section 731.211. UEI has committed to provide for mitigation of any lost water rights as per Chapter 7 Section 727.

525.490. Other information specified by the Division as necessary to demonstrate that the operation will be conducted in accordance with R645-301-525.300 will be provided.

525.500. Repair of damage.

525.510. If effects of subsidence are confirmed, any material damage to the surface lands will be restored to the extent technologically and economically feasible. The land will be restored to a condition capable of maintaining the value and reasonable foreseeable uses which it was capable of supporting before the subsidence.

525.520. Since no structures exist within or adjacent to the permit area which could be damaged by subsidence, should it occur, this section does not apply.

525.530. The Little Park Road exists in the subsidence zone. In the unlikely event the road is damaged by subsidence, UEI will repair the damage as per Section 525.120.

525.600. Public Notice.

At least six months prior to mining, or within that period if approved by the Division, the underground mine

operator will mail a notification to all owners and occupants of surface property and structures above the underground workings. The notification oil include, at a minimum, identification of specific areas in which mining will take placce, dates that specific areas will be undermined, and the location or locations where the operator's subsidence control plan may be examined.

526. A narrative explaining the construction, modification, use, maintenance and removal of the mine facilities follows. Additional information can be found in Appendix 5-4 and Chapter 8.

526.100 Mine Structures and Facilities.

526.110 The only existing structures are found in Horse Canyon (Part "A" of this permit) and are the remains of the United States Steel operation. Horse Canyon has received phase II bond release and the remaining structures have been left in place for future use. Only three existing structures, a 60" and a 48" CMP culverts located near the new proposed surface facilities, and the County road on top of Little Park, can be found within the Lila Canyon Permit. The existing culvert is shown on plate 5-1A. The existing road on Little Park can be found on Plate 5-1 as well as most other plates showing the surface area of the Lila Canyon Permit. Several vehicle ways will be used for water and subsidence monitoring. These ways branch off the Little Park Road and generally follow the ephemeral drainages. The ways are shown on Plate 5-1 as well as most other plates showing the surface area of the Lila Canyon Permit. More detail of the existing Little Park Road can be found in ~~App.~~Appendix 5-4.

526.111 The location of the existing culverts is shown on Plate 5-1A.

526.112 Most of the existing 48" culvert is outside the permit boundary and is the Counties responsibility. UEI will grade the site so that during reclamation and operations surface flows will be directed away from the 48" culvert. The 60" culvert is in poor condition and will be replaced by the county. UEI will add on to the

527.100 All new roads within the disturbed area have been classified as primary ~~except for the coal pile road which is used infrequently~~.

527.110 See Sections 527.120 and 527.130.

527.120 The Slope Access Road / Portal Access Road and the Mine Facilities Road / Truck Loadout Road will be used frequently for access for a period in excess of six months, and or will transport coal, they are classified as primary roads.

527.121 See 527.120 above.

527.122 See 527.120 above.

527.123 Since none of the new roads planned within the disturbed area will be retained for an approved postmining land use this section does not apply.

527.130 ~~The Coal Pile Road is used infrequency and will be classified as~~There are no ancillary roads within the disturbed area. .

527.200 A detailed design and description for each road, and conveyor to be constructed used, and maintained within the proposed permit area is included in Appendix 5-4. The roads are show on Plate 5-2.

527.210 The specifications for each road width, road gradient, road surface, road cut, fills, embankments culverts, drainage ditches and drainage structures are shown on Plate 5-2 and in Appendixes 5-4 and 7-4.

527.220 Since no alteration or relocation of natural drainage ways is anticipated this section is not applicable.

527.230 Roads shall be maintained in manner that allows them to meet their design standards throughout their use.

527.240 If any of the roads on the disturbed area is damaged by a catastrophic event, the road will be repaired as soon as practical after the damage has occurred.

527.250 Steep cut slopes or requests for alternative specifications

are not anticipated at this time therefore this section does not apply.

528. Handling and Disposal of Coal, Overburden, etc:

A narrative explaining the construction modifications, use, maintenance and removal of coal, overburden, excess spoil and coal mine waste.

528.100 Coal will be mined using continuous miners and longwall equipment. The coal will be transported from the face and deposited on the underground mine belts using shuttle cars or continuous haulage equipment. The coal will be transported by a series of conveyor belts from the section to the run of mine stockpile. The coal will be removed from the run of mine stockpile by a reclaim belt to an enclosed ~~crusher~~crusher/screen. Once crushed the coal will be conveyed to a storage bin from which it will loaded in to coal haul trucks for transportation to a unit train loadout.

528.200 Overburden: Lila Canyon is an underground operation and it is not anticipated that any material that overlays the coal seam, consolidated, or unconsolidated, other than topsoil, will be disturbed. Therefore, this section does not apply.

528.300 Spoil, coal processing waste, mine development waste, and noncoal waste removal, handling, storage, transportation, and disposal areas and structures are discussed below.

528.310 Excess Spoil: Since Lila Canyon is an underground operation it is not anticipated than any spoil will be generated. Therefore this section does not apply.

528.320 Coal Mine Waste: Coal processing waste and underground development waste brought to the surface, will be placed in disposal areas within the permit area which are approved by the Division for this purpose. Rock removed from the access slopes will be placed in the ~~refuse pile~~rock slope material disposal area. Portions of this material, not containing coal, will be used as structural fill for the shop/warehouse. ~~The areas for the rock slope material and for underground development waste are adjacent and conjoining and will be treated as one area or structure. The refuse pile is~~The temporary refuse pile and slope rock disposal area are shown on Plate 5-2 and in Appendix 5-7.

528.321 Coal processing waste produced from the crusher will not be returned to any abandoned underground workings. Any and all of the coal processing waste from the crusher will be deposited in the temporary refuse pile shown on plate 5-2 and in Appendix 5-7 and then transported to UEI's Wildcat loadout for permanent disposal.

528.322 Refuse Piles. Each pile will meet the requirements of MSHA, 30 CFR 77.214 and 30 CFR 77.215, meet the design criteria of R645-301-210, R645-301-512.230, R645-301-513.400, R645-301-514.200, R645-301-515.200, R645-301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.500, R645-301-536.900, R645-301-542.730, R645-301-553.250, R645-301-746.100, R645-301-746.200, and any other applicable requirements.

528.323 Burning and Burned Waste Utilization.

528.323.1. Coal mine waste fires will be extinguished by the person who conducts coal mining and reclamation operations, in accordance with a plan approved by the Division and MSHA. The plan will contain, at a minimum, provisions to ensure that only those persons authorized by the operator, and who have an understanding of the procedures to be used, will be involved in the extinguishing operations. The coal mine waste fire plan can be found in Appendix 5-3. MSHA approval is not required unless you have an actively burning fire. (Phone conversation with Billy Owens MSHA Denver 5/31/05)

528.323.2. No burning or burned coal mine waste will be removed from the permitted disposal area.

528.330 Noncoal Mine Waste.

types of coal mine waste:

1. Normal coal processing waste or refuse and;
2. Underground development waste.

~~Disposal of each of the 2 types of coal mine waste will be the same and both type will be deposited in the refuse storage area shown on plate 5-2.~~

(rock slope material).

The rock slope material / underground development waste will be examined and tested as necessary to determine acid- or toxic-forming potential.

Coal Processing waste and any underground development waste containing too much coal to leave underground, will be disposed of in the refuse storage area as described further in this chapter and in Appendix 5-7.

It is not anticipated that any underground waste other than the rock slope material / underground development waste will be brought to the surface. Coal processing waste and underground development waste brought to the surface will be placed in a controlled manner and have a design certifications describe under R645-301-512 if appropriate.

536.100 The refuse pile at Wildcat has been designed using current prudent engineering practices and will meet design criteria established by the Division. ~~See Appendix 5-7.~~

536.110 The refuse pile will be designed to attain a minimum long-term slope stability safety factor of 1.5. See Appendix 5-7.

536.120 The refuse pile will be constructed on natural ground once the topsoil has been removed according to section 230.232. There are no underground mine workings in the immediate area of the refuse pile. All mine workings are found at a higher elevation than the refuse pile.

536.200 Underground development waste brought to the surface and coal processing waste deposited in the refuse pile will be

deposited according to the plan described in Appendix 5-7.

536.210 Refuse Pile construction described in Appendix 5-7, will ensure mass stability and prevent mass movement during and after construction;

536.220 Refuse Pile construction per the plan in Appendix 5-7 will not create a public hazard; and

536.230 Will prevent combustion.

536.300 Since no spoil fills will be generated this section does not apply.

536.400 Since there will not be any impounding structures constructed of coal mine waste this section does not apply.

536.500 As discussed in Section 536 and 536.300, it is proposed to dispose of the rock slope material / underground development waste within the ~~refuse~~rock disposal area and be used as structural fill as shown on Plate 5-2.

536.510 It is not anticipated that coal mine waste ~~will~~materials from activities located outside the permit area be disposed of in ~~any area off~~ the permit area.- Therefore this section does not apply.

536.520 It is not anticipated that coal mine waste will be ~~disposed of in any area off the permit area. Therefore~~brought to the surface then taken back underground for disposal therefore this section does not apply.

536.600 In areas where slope rock or coal processing waste is deposited, the topsoil will be removed and stored in the topsoil stockpile area until reclamation.

536.700 It is not anticipated that coal processing waste will be returned to abandoned underground workings therefore this section does not apply

536.800 Since no coal processing waste banks, dams, or embankments are planned for the Lila Canyon Mine therefore, this section does not apply.

536.900 Refuse Piles. (See Appendix 5-7) The refuse pile is designed to

542.200. The perimeter of the disturbed area contains approximately 42.6 surface acres within the disturbed area but only ~~25~~33.~~3~~86 acres will be disturbed leaving ~~17.3~~8.74 acres of undisturbed islands within the disturbed area.
The following R645 regulations will give detailed description and reclamation procedures to address these areas of disturbance. The reclamation plan for the sediment pond and drainage control structures can be found in Appendix 7-4.

Topsoil amounts can be found in Section 232.100 and are calculated from Plate 203. Concrete amounts can be calculated from the text in Section 520. Coal Mine Waste volumes can be found in Appendix 5-7. Volumes were calculated using a Cad system.

542.300. Included.

542.310. Included. (See Plates 5-6 & 7-7)

542.320. There will not be any surface facilities left post mining.

542.400. Not applicable. No surface facilities will remain post bond liability period.

542.500. A reclamation time table is included as Table 3-3.

542.600. All roads within the disturbed area will be reclaimed immediately after they are no longer needed for mining and reclamation operations.

542.610. The time table of reclamation activities will enable the roads to be removed concurrently with reclamation activities. So, no closures specific to traffic would be anticipated.

542.620. All bridges and culverts will be removed concurrent with reclamation.

542.630. All disturbed areas will be ripped and top soiled prior to revegetation activities in compliance with

all applicable R645 regulations. (See Appendix 5-8)

542.640. Road surfacing materials such as sand and gravel, which are not suitable for revegetation establishment will be buried on site and covered with a minimum of two feet of material that would support vegetation. Concrete will be disposed of in the designated area and covered with four feet of cover. Asphalt will be disposed of off site, either in a landfill or sent to a recycling facility.

542.700. Final Abandonment of Mine Openings and Disposal Areas.

542.710. Appendix 5-6 depicts a typical seal that will be constructed at all mine openings.

542.720. No excess spoil is anticipated at this time.

542.730. All coal mine waste will be placed in the waste disposal area as shown on Plate 5-2 or sent to the Wildcat loadout, and reclaimed in accordance with R645 regulations.

542.740. Disposal of Noncoal Mine Wastes.

542.741. All non coal waste will be temporarily stored on site in approved waste bins and commercially picked up and transported to an approved disposal site. Non Coal waste generated during reclamation (such as concrete structure, buried culverts, utility lines, septic systems etc.) will be buried in the refuse disposal area and covered with a minimum of four feet of fill.

542.742. No noncoal waste will be stored on site or disposed of on site during the life of the mine.

542.800. A detailed cost break down is included in Chapter 8. Appendix 8-1 relative to bonding.

550 Reclamation Design Criteria and Plans. Each permit application will include site specific plans that incorporate the following design criteria for reclamation activities.

551. All underground openings will be sealed as detailed in Appendix 5-6.

552. Permanent Features.

552.100. In course of reclamation, areas that have been recontoured and top soiled will be "pock-marked" creating small basins that will facilitate vegetation establishment as well as minimizing erosion.

552.200. No permanent impoundments will be left post reclamation.

553. The operator will comply with all regulations applicable to underground mining activities relative to backfilling and grading as required by R645 regulations.

Some minor cut slopes along the reclaimed road may be left after reclamation due to the difficulty and inability to reclaim all material pushed over the side while making the road cut. See plate 5-7B-~~1~~2 cross section 16+00 for details. UEI will make reasonable efforts to minimize the cut slopes being left.

553.100. Disturbed Areas. Disturbed areas will be backfilled and graded to:

553.110 The operator will obtain a post mining topography similar in form as what existed premining.

553.120 Since Lila Canyon is an underground operation, no spoil piles will be created. Minor highwalls may be created with the development of the rock slope portals. Upon completion of mining these entries will be seal as per Closure for Mine Openings Appendix 5-6 and all highwalls will be eliminated during the reclamation phase of the operation. Plate 5-9 shows the proposed portal plan. During reclamation, suitable material will be placed against

the portals. This material will be shaped to eliminate the highwall and to bring the slope back to the approximate original contour. A Cat model 216/226 or equivalent will be used to complete the final grading of the fan portal. After final grading the 216/226 will be airlifted out using a KMAX helicopter or equivalent.

553.130 All fill slope will have a static safety factor of 1.3 as shown in Appendix 5-5.

553.140 Erosion and water pollution will be minimized on site by the use of drainage control structures (burms, channels and silt fence) and the use of small depression, soil tackifiers, mulch and sediment pond design. No water is anticipated leaving the reclaimed site prior to adequate treatment in the form of retention and/or filtration that does not meet and/or exceed UPDES standards.

553.150 The post mining land use of wildlife and domestic grazing should be enhanced to some degree with the revegetation of a more desirable seed mix and a vegetative cover in excess of what was present premining.

553.200 Spoil and Waste.

553.210 All underground development waste brought to the surface will be placed in the coal mine waste (rock slope material) disposal area and ~~e~~reclaimed in accordance with R645 regulations. Coal processing waste generated on the surface as a result of coal processing will be ~~placed in the coal mine waste (refuse) disposal area and reclaimed in accordance with R645 regulations.~~shipped to ECDC.,

553.220 Since no spoil will be produced this section does not apply.

553.221 All vegetation and /or organic material will be removed prior to any coal mine waste

being stored.

553.222 All useable topsoil or topsoil substitute will be removed from the structural fill and refuse areas prior to use. Table 2-1 shows estimates of salvageable soil by soil type based on current NRCS soil inventories. The location of the soil storage are shown on Plate 5-2. This material will be spread over the recontoured structural fill and refuse areas prior to seeding and mulching.

553.223 Since no spoil will be produced this section does not apply.

553.230 All recontoured areas will be compacted to minimize slippage. The area will then be over laid with topsoil and ripped. In addition the area will be "pock-marked" to minimize the potential for erosion as well as enhance revegetation establishment. It is not anticipated that soil will be disturbed in areas to steep for equipment to operate.

553.240 The ~~refuse and s~~tructural fill area~~s~~ will have slopes of less than 8% upon final recontouring and revegetated to enhance the post mining land use of grazing and wildlife habitat.

553.250 ~~The~~A need for a refuse pile ~~design~~at Lila Canyon is ~~shown in appendix 5-7~~not anticipated.

553.260 The operator will commit to all applicable R645 regulations relative to disposal of coal processing waste.

553.300 Any combustible materials or acid and toxic forming materials exposed used or produced during mining will be ~~disposed of in the refuse disposal area and t~~reated as refuse and hauled to ECDC. This material will be covered by four feet of fill. Noncoal waste will be disposed of as described in Section 528.331.

553.400 Cut-and-fill terraces may be allowed by the Division

WordPerfect Document Compare Summary

Original document: C:\Lila\Correspondance\2009\Submittals\09-003 Surface Changes Deficiencies\Chapter 7\Chapter 7 07-002.wpd
Revised document:
@PFDesktop\:MyComputer\C:\Lila\Correspondance\2009\Submittals\09-003 Surface Changes Deficiencies\Chapter 7\Chapter 7 09-003 Tom Revised.wpd
Deletions are shown with the following attributes and color:
~~Strikeout~~, Blue RGB(0,0,255).
Deleted text is shown as full text.
Insertions are shown with the following attributes and color:
Double Underline, Redline, Red RGB(255,0,0).

The document was marked with 79 Deletions, 123 Insertions, 0 Moves.

Horse Canyon Extension
Lila Canyon Mine

Chapter 7
Hydrology
09-003

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measured water levels are shown on Plate 7-1. It should be noted that the monitoring of these holes was done over the 2 3/4 year period to provide baseline data for the South Lease by I.P.A. Monitoring of water depths at these points by UtahAmerican commenced in December 2000 and continued through present. As indicated by the data in Appendix 7-1, the water levels in the holes show very little fluctuation. Levels change from less than 1.2' to a maximum of 21.2' over an eight year monitoring period. Figure 7-2A and 7-2B present the seasonal fluctuations of the water levels as contour maps and hydrographs. Using these water levels, an estimate of the projected water level assuming that the zones from the individual piezometers are connected is shown on Plate 7-1 and the monitoring results are included in Appendix 7-1 - Baseline Monitoring.

The piezometers were installed to provide depth of water only. It is impossible to drop a bailer 1000 feet and withdraw a water sample without contaminating the sample. It has been suggested that sampling pumps be installed on these wells. Appendix 7-11 discusses the difficulties of using pumps and bailers in these ~~wells~~piezometers. Due to limited pump capabilities in a 2-inch diameter well such sampling is not feasible. Therefore the depth and diameter of the piezometers holes make it impossible to use them for baseline quality sampling.

Drill holes S-26, S-27, S-28, and S-31 were cased in 3" PVC pipe with bottom perforations for water monitoring; however, cement seals were faulty, allowing the PVC pipe to fill with cement. Drill hole S-26 was reported dry in the week prior to cementing.

It has been reported by Kaiser that holes within one and one-quarter miles east of the cliff face were drilled with air, mist and foam and did not detect any water in the subsurface with the exception of drill hole S-32. No apparent increase in fluid level could be attributed to groundwater inflow from these holes, some of which were open for two weeks. Exploration drill holes in the South Lease property south of Williams Draw did not encounter groundwater within 1 to 1.25 miles of the coal outcrop. Exploration drill holes in the South Lease property, south of Williams Draw, did not encounter groundwater within 1 to 1.25 miles of the coal outcrop.

S-32 is located approximately three miles south of Lila Canyon and is separated from Lila by at least two known fault systems. The drill log along with the Chronology of Development and Pump tests are included in Appendix 6-1. Water levels measured are shown in the `"Chronology of Development". Water quality analysis for S-32 is also included in Appendix

generally not evident below the mine site. Only flows from summer thunderstorms upstream of the site have resulted in flows below the mine. This indicates that while surface water resources may fluctuate, the fluctuations are not great enough to change the response of the stream to overcome the hydraulic and geologic characteristics of the area.

During most years, the snowmelt peak is the highest peak flow for the drainages. Under certain circumstances, when a significant summer thunderstorm occurs over the drainages, the runoff event can be quite large. In the area of the springs, there are sections with continuous flow, where the channel has cut into the perching layer of the spring. The flows from the springs continue a short distance downstream of the spring location; however, there is no base flow contribution within the channel itself. The only flow is a result of the spring discharge and this is absorbed by the channel fill indicating a losing stream reach. There are no indications that any other reaches of Lila Canyon or Little Park Wash are perennial. Since the spring of 2000, both areas have been observed numerous times (at least quarterly) and no flow has even been noted in either drainage. Normally, this would indicate an ephemeral drainage, however, since the drainage areas are greater than one square mile and exhibit no consistent flows, they are classified by regulation as intermittent.

~~The stream channels on and adjacent to the Lila Canyon Mine permit area have been characterized in Appendix 7-1, Appendix 7-7, Appendix 7-10, Table 7-1A Table 7-2 and Table 7-1C to be naturally ephemeral. Perennial and intermittent streams yield a flow that is mostly continuous and dependable, known as baseflow. Baseflow is a water supply from groundwater that keeps flow in the stream channels after snowmelt and rainfall runoff has ended. Perennial stream channels have a baseflow year around, while intermittent streams maintain a baseflow during part of the year, usually during spring and early summer. A stream with baseflow has a more dependable water source that can support more vegetation, wildlife, agriculture and industry. Ephemeral stream channels do not have a baseflow. They do not support lush vegetation, wildlife, agriculture or industry. All the stream channels draining from the Lila Canyon permit area do not have a baseflow, except immediately next to springs, as discussed earlier. There are no water rights filed down stream of the mine site that can be impacted from mining operations.~~

may cause heavy flooding, but likely only affect small areas and do not result in large volumes of runoff.

For the long duration, frontal type storms, the entire watershed is covered for each event. The frontal precipitation events tend to produce only limited amounts of flow in the local ephemeral washes for the short return periods. With the increase in the return period, the flow events tend to be larger. This is due to the contribution from the entire watershed.

Each flow event in an ephemeral channel is separate and distinct. The stream flow is directly proportional to the amount of precipitation or snow-melt runoff, and the water quality varies greatly depending on the amount of flow. The duration of these runoff events is generally short. For thunderstorm events, the flow is generally less than a few hours. Duration of runoff from the frontal runoff events is moderate in length, generally on the order of 11 to 14 hours. Based on the end of rainfall from the watershed model simulations, the runoff would generally end within 3 to 5 hours. Therefore, if a sampler were not on-site during the event, it is unlikely that any flow would be observed.

Table 7-1A
~~See Figure 1 in Appendix 7-10~~
PEAK FLOW SIMULATIONS OF UNDISTURBED DRAINAGES
IN THE LILA CANYON MINE AREA

Watershed ID	Return Period	2yr (cfs)	5yr (cfs)	10yr (cfs)	25yr (cfs)	50yr (cfs)	100yr (cfs)
WS1.1	6 hr	0	0	1.39	5.54	9.98	17.18
	24 hr	0.65	3.22	9.31	22.68	39.50	59.77
WS1.2	6 hr	0	0	1.21	6.43	12.77	22.18
	24 hr	0.86	3.82	9.45	20.66	33.99	49.70
WS1 Total	6 hr	0	0	2.37	11.78	22.68	38.79
	24 hr	1.50	6.62	16.96	39.59	67.46	100.70
WS7 Total	6 hr	0	0	2.23	10.43	19.63	33.75
	24 hr	1.29	6.04	15.85	36.15	60.94	90.24

Table 7-1A

~~See Figure 1 in Appendix 7-10~~

PEAK FLOW SIMULATIONS OF UNDISTURBED DRAINAGES
IN THE LILA CANYON MINE AREA

Watershed ID	Return Period	2yr (cfs)	5yr (cfs)	10yr (cfs)	25yr (cfs)	50yr (cfs)	100yr (cfs)
WS8 Total	6 hr	0	0	0.85	3.60	6.59	11.34
	24 hr	0.43	2.09	5.76	13.64	23.46	35.09
WS9 Total	6 hr	0	0	3.46	16.17	30.46	52.36
	24 hr	2.01	9.38	24.59	56.08	94.53	139.99

Table 7-1A

~~See Figure 1 in Appendix 7-10~~

PEAK FLOW SIMULATIONS OF UNDISTURBED DRAINAGES
IN THE LILA CANYON MINE AREA

Watershed ID	Return Period	2yr (cfs)	5yr (cfs)	10yr (cfs)	25yr (cfs)	50yr (cfs)	100yr (cfs)
Little Park 6.1	6 hr	0	0	1.63	6.48	11.66	20.08
	24 hr	0.76	3.76	10.88	26.5	46.16	69.84
Little Park 6.2	6 hr	0	0	0.93	3.70	6.66	11.47
	24 hr	0.44	2.15	6.21	15.14	26.36	39.89
Little Park 6 Cumulative	6 hr	0	0	2.56	10.18	18.33	31.54
	24 hr	1.20	5.91	17.09	41.63	72.52	109.74
Little Park 6.3	6 hr	0	0	0.32	1.21	2.15	3.70
	24 hr	0.14	0.70	2.17	5.47	9.75	14.92
Little Park 5.1	6 hr	0	0	0.31	1.00	1.73	2.93
	24 hr	0.11	0.59	2.41	7.85	15.16	23.59
Little Park 5.2	6 hr	0	0	0.73	2.75	4.87	8.38
	24 hr	0.32	1.59	4.92	12.40	22.10	33.82
Little Park 5 Cumulative	6 hr	0	0	2.82	11.34	20.41	35.22
	24 hr	1.77	8.54	24.80	61.16	107.32	163.42
Little Park 4.1	6 hr	0	0	0.75	2.58	4.47	7.65
	24 hr	0.29	1.49	5.31	14.72	28.04	43.72
Little Park 4.2	6 hr	0	0	0.76	3.01	5.42	9.33
	24 hr	0.36	1.75	5.06	12.32	21.46	32.47
Little Park 6.4	6 hr	0	0	0.23	0.86	1.53	2.64
	24 hr	0.10	0.50	1.55	3.90	6.95	10.64

Table 7-1A

~~See Figure 1 in Appendix 7-10~~

PEAK FLOW SIMULATIONS OF UNDISTURBED DRAINAGES
IN THE LILA CANYON MINE AREA

Watershed ID	Return Period	2yr (cfs)	5yr (cfs)	10yr (cfs)	25yr (cfs)	50yr (cfs)	100yr (cfs)
Little Park 6.5	6 hr	0	0	0.90	3.58	6.45	11.10
	24 hr	0.42	2.08	6.02	14.66	25.53	38.63
Little Park 4 Cumulative	6 hr	0	0	6.17	24.81	44.74	77.12
	24 hr	2.93	14.01	40.73	101.08	178.91	269.04
Little Park 6.6	6 hr	0	0	0.87	4.44	8.64	14.92
	24 hr	0.58	2.60	6.58	14.58	24.18	35.52
Little Park 3.1	6 hr	0	0	2.35	8.86	15.72	27.03
	24 hr	1.03	5.13	15.87	40.00	71.27	109.07
Little Park 3.2	6 hr	0	0	1.00	4.65	8.76	15.07
	24 hr	0.58	2.70	7.08	16.14	27.20	40.29
Little Park 3 Cumulative	6 hr	0	0	9.73	42.29	77.65	133.01
	24 hr	5.08	23.46	65.66	162.22	284.24	430.10
Little Park 6.7	6 hr	0	0	0.76	4.53	9.00	15.63
	24 hr	0.60	2.69	6.66	14.57	23.96	35.04
Little Park 2.1	6 hr	0	0	0	1.84	4.30	7.79
	24 hr	0.17	0.81	2.54	7.96	14.23	24.90
Little Park 2.2	6 hr	0	0	0.64	3.68	7.15	12.35
	24 hr	0.48	2.16	5.45	12.07	20.02	29.40

Table 7-1A
~~See Figure 1 in Appendix 7-10~~
PEAK FLOW SIMULATIONS OF UNDISTURBED DRAINAGES
IN THE LILA CANYON MINE AREA

Watershed ID	Return Period	2yr (cfs)	5yr (cfs)	10yr (cfs)	25yr (cfs)	50yr (cfs)	100yr (cfs)
Little Park 2 Cumulative	6 hr	0	0	11.07	54.40	100.57	168.92
	24 hr	6.59	29.31	80.68	192.12	329.11	493.91
Little Park Total	6 hr	0	0	11.56	58.64	110.02	183.99
	24 hr	7.24	31.45	84.30	199.12	340.37	508.74

To determine the extent of the protection of these runoff waters, the downstream state appropriated waters were evaluated. As listed in Table 7-2 and shown on Plate 7-3, the downstream water rights are held by the BLM and consist of 91-2617, -2618, -2619, -2620, -2621, -2646, -2665, -4516, -4646, -4648, and -4649. As reported in Table 7-2, most of these rights have ~~a flow source of stream or wash. These rights~~no flow and no use associated with them. According to the State Engineers web site, these rights have not yet been evaluated to determine if there is sufficient water to meet the right. Many of these rights are located on the stream and some are for stock ponds to be located off stream. However, in reviewing these locations, ~~it was found that these stock ponds did not receive flow from the main wash and in checking with the BLM, most of the sources of flow to the ponds were from the side tributaries or from adjacent drainages. Plate 7-3 shows the location and name of the various ponds that the BLM are aware of in the area. Also, the plate shows the various water rights that are associated with each of the ponds. Based on the BLM information there are four ponds that exist for which no water right has been filed (see Plate 7-3). A site investigation was conducted by DOGM in late fall 2006 to verify the location of the ponds and the flow source for each. It is UEI's understanding that DOGM representatives concur with the above locations and descriptions.~~

~~As shown on Plate 7-3, a pond, labeled Blaine's Folley Reservoir, located near~~except for 91-2621, no stock ponds have been located in these areas. The BLM pond located at the location of water right 91-2621 had some improvement work conducted in 2004 (see Appendix 7-9). ~~It was assumed, at the time, that~~

~~this must be the water right location and a BLM pond; h~~However, ~~in recent meetings with the BLM it was determined that~~ the BLM was not involved in the pond improvements ~~and the pond was not a BLM structure~~. ~~Subsequent~~Recent site investigation ~~showeds~~ that the diversion structure described in Appendix 7-9 ~~hads~~ been breached and no flow now reaches the pond from Grassy Wash. ~~Also, it was discovered that this pond was not covered by a water right and that water right 91-2621 was for a pond to the west of the site described in Appendix 7-9 (see Plate 7-3).~~

There are two water rights for isolated stock ponds in the head waters of Stinky Spring Canyon, 91-4648 for Dryden Reservoir located in the SE/4, SW/4, Section 14, T16S, R14E and 91-4649 for Sams Pond located in the NW/4, NE/4, Section 23, T16S, R14E (see Plates 7-1 and 7-3). Both of the water rights are owned by the BLM and have a maximum capacity of 3 ac-ft. No records have been found that these ponds were constructed. Based on the maximum capacity of the ponds, it is expected that these ponds would be about one half acre in size, assuming a depth of 5 feet. Field inspection of the quarter sections found no ponds along the ephemeral drainages and review of aerial photos of the area also did not reveal any ponds in the area. Based on the locations for the water rights, the area for water right 91-4648 is shown in a photograph presented in Attachment 1 of Appendix 7-7 (Photo 93 - Page 28). As can be seen, there is no stock pond in this area. The area for water right 91-4649 is shown in photographs taken in the area (see Figure 7-5) indicated in the water right of the pond. No pond has been found. The only thing found in the designated area is an area of grass in the pinyon juniper.

Based on ~~sources of the water for the ponds in the area downstream of the permit area, being from drainages which are not part of nor influenced by the permit area~~water rights flow values and the lack of a specified use, it is assumed that the State Engineer and the BLM had planned to develop range improvements in the area, but the lack of water made this effort unsuccessful. Given the lack of use for these downstream channels, it does not appear that ~~there will be any impact to~~a significant concern exists for the downstream waters ~~from mine-related conditions~~.

Surface waters in this part of the Book Cliffs drain to the Price River. The Price River flows to the Green River which, in turn, flows to the Colorado River. It is anticipated that only during extremely long duration, high-intensity thunderstorms that flow from the ephemeral and intermittent drainages within the permit area would reach the Price River. Due to the length of channel and the limited volume of runoff, the majority of flow is lost to channel losses, as indicated in Appendix 7-9.

right. ~~Additionally, data on the stock ponds downstream of the proposed permit area were gathered from the BLM as to the location and water right on file, if any.~~ A description of each of the rights, including the name of the water right owner, point of diversion, source of the water, along with the allotted flow and the designated use of the water is tabulated in Table 7-2. Due to the limited volume of water available, the condition of most of the spring and stock pond facilities is very poor. Based on the water rights, for the area of the mine, the use is limited to stockwatering of less than 250 animal units.

Table 7-2

LILA CANYON MINE AREA
Water Rights

Water Right/Owner	cfs	gpm	ac.ft.	Source	Use	Point of Diversion
91-557 Eardley, Joseph K.	0	-	0	So. Fork Horse Canyon Creek	Stockwatering	SW 34, T. 15 S, R. 14 E.
91-557 Eardley Joseph K.	0	-	0	So. Fork Horse Canyon Creek	Stockwatering	NE 34, T. 15 S, R. 14 E.
91-1903 State of Utah	0.08	36	0	Spring	Stockwatering	SE 35, T. 15 S, R. 14 E.
*91-148 IPA	0.30	135	0	U. G. Tunnel	Other	NW 3, T. 16 S., R. 14 E.
*91-149 IPA	0.10	45	0	U. G. Tunnel	Other	NW 3, T. 16 S., R. 14 E.
*91-150 IPA	0.10	45	0	U. G. Tunnel	Other	NW 3, T. 16 S., R. 14 E.
*91-4959 CEUF	0.00	-	5.00	Redden Spring	Mining	NE 3, T. 16 S., R. 14 E.
91-2616 BLM	0	-	0	Stream	Stockwatering	NW 3, T. 16 S., R. 14 E.
*91-183 CEUF	0.8	359	0	Horse Canyon Creek	Domestic, Other	SE 1/4 3, T.. 16 S., R. 14 E.
91-185 Minerals Devel. Co.	0.0190	9	0	Well	Domestic, Other	NW 9, T. 16 S., R. 14 E.

L-16-G	Stinky Spring Wash	Seep
L-17-G	Stinky Spring Wash	Seep
L-18-S	Stinky Spring Wash	Intermitteant by rule with ephemeral flow
~~L-19-S~~	~~Little Park Wash~~	~~Intermittent by rule with ephemeral flow~~
IPA-1	Little Park Wash	Borehole
IPA-2	Little Park Wash	Borehole
IPA-3	Little Park Wash	Borehole

Sampling at Locations L-13-S, ~~and~~L-14-S, L-15-S, and L-18-S will no longer be required once the washes have been characterized as intermittent by rule with ephemeral flow or Ephemeral.

Locations of all monitoring sites are shown on Plate 7-4 , "Water Monitoring Location Map".

Proposed monitoring methods, parameters and frequencies are described in Table 7-3, "Water Monitoring Stations", Table 7-4, "Surface Water Monitoring Parameters", and Table 7-5 "Ground Water Monitoring Parameters".

In any one quarter a minimum of three unsuccessful attempts will be made by using either 4 wheel drive vehicles or ATV's to access all water monitoring sites prior to reporting any site as "No Access". However, safety and common sense will prevail while making these attempts.

Monitoring reports will be submitted to the Division at least every 3 months, within 30 days following the end of each quarter.

731.221 Surface-Water Monitoring Plan The proposed surface-water monitoring plan is detailed in Section 731.220. This plan is based on PHC determination and analysis of all baseline hydrologic, geologic and other information in this permit application. The plan provides for monitoring of parameters that relate to the suitability of the surface water for current and approved postmining land uses and to the objectives for protection of the hydrologic balance as set forth in 751 (see Table 7-4).

731.222 Surface-Water Monitoring Parameters The surface-water monitoring parameters are shown in Table 7-4. Water monitoring locations and sample frequencies are described in Table 7-3 and on Plate 7-4 .

Table 7-3
Lila Canyon Mine
Water Monitoring Stations

Station	Location	Type	Frequency	Remarks
L-13-S	Little Park Wash	Dry Wash	Monthly	At Road Crossing
L-14-S	Section 25 Wash	Dry Wash	Monthly	At Road Crossing
L-15-S	Williams Draw Wash	Dry Wash	Sampling Suspended 1Qtr of 2003	At Road Crossing
L-16-G	Stinky Spring Wash	Seep	Quarterly	Top of Mancos
L-17-G	Stinky Spring Wash	Seep	Quarterly	Top of Mancos
L-18-S	Stinky Springs Wash	Dry Wash	Monthly	Adjacent to Access Road
L-19-S	Little Park Wash	Dry Wash	Monthly	At Permit Boundary
IPA-1	Little Park	Borehole	Quarterly	Water Level Only
IPA-2	Little Park	Borehole	Quarterly	Water Level Only
IPA-3	Little Park	Borehole	Quarterly	Water Level Only

NOTE: Sites L-13-S, ~~and~~L-14-S, L-15-S, and L-18-S will no longer be monitored after the washes have been characterized.

731.521 Portal Location The proposed access portals are below the coal outcrop, as shown on Figure 7-1, Plates 5-5 and 7-5. The fan is to be located above, at the outcrop. The rock slopes will slope up to the east at approximately 12% to contact the coal seam; however, the coal seam is dipping down to the east in this area. The approximate point of contact between the rock slopes and the coal seam will be 1227' from the surface at an elevation of 6300'. Ground water levels in the mining area, based on the 3 water monitoring

holes and other geologic data, appear to be nearly static at elevation 5990 in this area (see Figure 7-1).

Water level in the mine would have to raise approximately 310' to reach the rock slope/coal seam contact and result in a gravity discharge. Water monitoring results and other historical data in the area do not indicate this is likely to occur.

731.522 Surface Entries after January 21, 1981 This is not known to be an acid-producing or iron-producing coal seam; however, proposed portals are located to prevent gravity discharge from the mine (see Section 731.521).

731.600 Buffer Zones All streams within the permit area are either ephemeral or intermittent by rule with ephemeral flow. In the area of the surface facilities along the intermittent by definition Lila Wash, the Operator will install stream buffer zone signs in locations shown on Plate 5-2 and maintain the buffer zones ~~throughout Phase 1 of~~during the ~~reclamation period~~operation.

731.700 Cross Sections and Maps The following is a list of cross-sections and maps provided in this section of the P.A.P.

Plate 7-1	Permit Area Hydrology Map
Plate 7-2	Disturbed Area Hydrology/Watershed

Plate 7-3	Water Rights Locations
Plate 7-4	Water Monitoring Location Map
Plate 7-5	Proposed Sediment Control Map
Plate 7-6a	Proposed Sediment Pond #1
Plate 7-6b	Proposed Sediment Pond #2
Plate 7-7	Post-Mining Hydrology

All required maps and cross-sections have been prepared by, or under the supervision of, and certified by a Registered Professional Engineer, State of Utah.

731.710 General Area Hydrology Plate 7-1.

731.720 Plate 7-2.

731.730 Water Monitoring Map Plate 7-4.

731.740 Sediment Pond Map Plate ~~7-6~~s 7-6a and 7-6b.

731.750 Plate ~~7-6~~7-6a & b.

731.760 Other Maps (See Section 731.700 for a complete list of maps provided in this section).

731.800 Water Rights and Replacement (See Section 727)

732. Sediment Control Measures

732.100 Siltation Structures The only proposed siltation structures for this site ~~is~~are the sediment ponds. All disturbed area runoff is proposed to be directed to ~~this~~these ponds for final treatment prior to discharge.

The sediment ponds will be constructed and maintained in compliance with applicable regulations. Details of the proposed ponds are discussed in the following section and in Appendix 7-4.

732.200 Sedimentation Ponds As discussed above, all disturbed area runoff is proposed to be directed to athe sediment ponds for final treatment prior to any discharge. The proposed sediment ponds

will be located at the low points of the disturbed area, as shown on Plate 7-5.

732.210 Sediment Pond Details The proposed sediment pond ~~is~~s are considered temporary, and will be removed during final reclamation. The pond ~~is~~s are designed in compliance with the requirements of the following sections, as required:

356.300 - The ponds will be maintained until the disturbed area has been stabilized and revegetated. Removal shall not be any sooner than 2 years after the last augmented seeding;

356.400 - Upon removal, the pond areas will be reclaimed and reseeded according to the reclamation plan;

513.200 - N/A - The proposed sediment ponds do~~es~~ not meet the size or other qualifying criteria of MSHA, 30 CFR 77.216(a);

763 - Refer to this regulation addressed later in this chapter.

Design details for the sediment ponds and site drainage control are addressed in Appendix 7-4 of this P.A.P.

732.220 MSHA Requirements This section does not apply since there are no plans for construction of coal processing waste dams or embankments at this site. The proposed ponds do~~es~~ not meet the size or other qualifying criteria of MSHA, 30 CFR 77.216(a).

732.300 Diversions There is one undisturbed diversion planned for this site. This diversion consists of a bypass culvert beneath ~~the~~ sediment pond No. 1, which will allow undisturbed runoff to bypass the site without mixing with disturbed area runoff.

Other diversions planned consist of disturbed area ditches and culverts, as shown on Plate 7-5. Design details for all diversions are provided in Appendix 7-4.

All diversions will be constructed and maintained to comply with the requirements of R645-301-742.100 and R645-301-742.300.

Details are described under those respective sections of this chapter.

732.400 Road Drainage All roads will be constructed, maintained and reconstructed to comply with R645-301-742.400. Specific information to road drainage is provided under that section of this chapter.

732.410 Alteration or Relocation of Natural Drainages There are no plans to construct roads which will require alteration or relocation of natural drainageways, other than by providing culverted crossings over ephemeral drainages. There are no plans to alter or relocate any intermittent or perennial drainages in conjunction with road construction.

Road construction and design details are provided in Chapter 5 of this P.A.P. Road drainage and culvert design details are provided in Appendix 7-4.

732.420 Culverts Culvert details are provided in Appendix 7-4. All undisturbed culvert inlets will be provided with headwall protection, consisting of inlet sections, rock or concrete.

733. Impoundments The only water impoundment proposed for this site ~~is~~are the sediment ponds. Design details for the ponds are provided in Appendix 7-4 and on Plate ~~7-6~~s 7-6a &b.

733.100 General Plans The general plan for this site is to drain runoff from the disturbed area into ~~a single~~two sedimentation ponds for treatment prior to discharge. Site drainage and design details are described in Appendix 7-4. The general plan includes the following, at a minimum:

733.110 Certification The sediment control plan and proposed sediment pond designs have been prepared and certified by a Registered Professional Engineer, State of Utah.

733.120 Maps and Cross Sections Sediment pond locations, design plans and cross sections are provided on Plates 7-5 and ~~7-6~~7-6a & b, respectively.

733.130 Narrative A complete description of the proposed sediment ponds along with volumes and design/construction details in provided in Appendix 7-4.

733.140 Survey The proposed sediment pond ~~is~~s are not located within a potential subsidence area from past underground mining operations.

733.150 Hydrologic and Geologic Information Relevant hydrologic and geologic information for the sediment pond ~~is~~s are provided in Appendix 7-4.

733.160 Certification Statement All proposed sediment pond structures are provided with this submittal. The structures will be constructed prior to construction of the mine site area, but not before receiving Division approval.

733.200 Permanent and Temporary Impoundments As indicated earlier, the proposed sediment pond ~~is~~s are classed as temporary.

733.210 Design Requirements The proposed sediment pond ~~is~~s are temporary; therefore, the pond ~~is~~s are not designed to meet requirements of MSHA 30 CFR 77.216.

The proposed pond ~~is~~s are not located where failure would expect to cause loss of life or serious property damage. As shown in Appendix 7-4, the proposed pond embankments will have a minimum of 3H : 1V on the inside slope and 2H : 1V on the outside. These slopes, along with the 95% compaction requirement, will ensure a static safety factor in excess of 1.3, as required.

733.220 Permanent Impoundment Section 733.220 is not applicable since the impoundments will be temporary.

733.230 Temporary Impoundment The proposed sediment ~~pond is~~ponds are temporary impoundments, and will be removed when reclamation sediment control and revegetation criteria are met, in accordance with Phase II Bond Release criteria.

733.240 Inspections/Potential Hazards As indicated under Section 515.200, if any examination or inspection shows a potential hazard exists, the person who examined the impoundments will promptly notify the Division of the finding and emergency procedures formatted for public protection and remedial action.

734. Discharge Structure All discharges from sedimentation ponds, diversions and culverts will be protected from erosion by the use of adequately sized rip-rap, concrete or other approved protection. Details for outlet protection for all drainage control structures are provided in aAppendix 7-4. All discharge structures have been designed according to standard engineering design procedures.

735. Disposal of Excess Spoil No excess spoil production is anticipated.

736. Coal Mine Waste Any areas designated for the disposal of coal mine waste will be constructed and maintained to comply with R645-301-746. Details are described under that section.

737. Noncoal Mine Waste Storage and final disposal of noncoal mine waste are described under section 747.

738. Temporary Casing and Sealing of Wells There are no wells proposed to be used to monitor ground water conditions associated with this permit or operation. The three Piezometers will be reclaimed according to the requirements of the Divisions's Performance Standards.

740. Design Criteria and Plans Design criteria and plans for this permit are detailed in Appendix 7-4. The following section will describe the general drainage and sediment control plan.

741. General Requirements The proposed operation is an underground mine with a relatively small surface disturbance for transportation, support and coal handling facilities. The proposed surface facilities will comprise a disturbed perimeter of approximately 42.6 acres. Access roads and utility lines will consist of approximately 10 acres of additional disturbance along a BLM Right-of-Way designated as a "Transportation Corridor".

The majority of undisturbed runoff from areas above the proposed mine site will be diverted beneath the site via an undisturbed diversion culvert.

Runoff from the disturbed mine site area will be directed to ~~a~~two sediment ponds, designed to contain and treat the runoff from a 10 year - 24 hour precipitation event for the contributing watersheds. Disturbed area runoff will be directed to the sediment ponds via a combination of properly sized ditches and culverts. The general drainage control plan for the mine site is shown on Plate 7-5. The complete Drainage Design and Control Plan is provided in Appendix 7-4 of this P.A.P.

742. Sediment Control Measures See Appendix 7-4 for Sediment Control Measure details.

742.100 General Requirements

742.110 Designed/Constructed/Maintained Appropriate sediment control measures will be designed, constructed and maintained using the best technology currently available to:

742.111 "Prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area;"

This will be accomplished by the construction of undisturbed diversions to allow most undisturbed runoff to by-pass the site and by routing all disturbed runoff to ~~a~~ sediment ponds for treatment prior to discharge.

742.112 "Meet the effluent limitations under R645-301-751;"

Any discharge from the sediment ponds will be made in compliance with all Utah and federal water quality laws and regulations and with effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR Part 434.

742.113 "Minimize erosion to the extent possible:" This will be accomplished by proper routing of drainage, and by the use of energy dissipators and/or erosion protection at all sediment pond, ditch and culvert outlets and in ditches where erosive velocities are expected.

742.120 Sediment Control Measure Sediment control measures within and adjacent to the disturbed areas are detailed in Appendix 7-4. These measures include, but are not limited to:

742.121 As discussed in Appendix 7-4, runoff from the disturbed area will be captured in ~~a~~ sediment ponds and/or treated as necessary to meet effluent limitations prior to discharge.

742.122 As discussed in Appendix 7-4, the majority of undisturbed drainage from above the mine site will be diverted via designed undisturbed diversions.

742.123 Undisturbed diversions will consist of properly designed and protected channels and/or culverts as described in Appendix 7-4.

742.124 The primary means of velocity reduction is planned to be the use of rip-rap; however, other methods such as straw dikes, check dams and/or vegetative filters may be employed during the operational or reclamation phases as determined necessary, and with Div~~i~~ersion approval.

742.125 There are no plans to treat runoff with chemicals. Based on extensive experience with runoff in this area, effluent requirements for discharge can normally be met by containment and settling in a sediment pond.

742.126 It is expected that water will be encountered in the underground mining; however, this water will be used for mining needs and only discharged when no further storage is available underground. Any discharge of mine water will meet applicable effluent limitations. Such water will be sampled (and treated if necessary) prior to discharge.

742.200 Siltation Structures As described in Appendix 7-4 the sediment ponds will provide for sediment removal for most of the surface facility disturbance. An alternate sediment control method of berms and silt fences will be used at the fan site, around the topsoil stockpile area, and on the slopes below the water treatment area and portal access road. The description of this alternate sediment

control method is also described in Appendix 7-4. ~~T~~In the case of the fan site, this is necessary due to its remote location and rough terrain. In the case of the water treatment slope, due to topography, there is no way to direct the runoff to the sediment basins. Other sediment structures that might be used around the surface facilities are temporary sediment traps such as straw dikes and/or catch basins.

742.210 General Requirements Siltation structures will be designed, constructed and maintained in accordance with the following regulations.

742.211 Siltation structures will be constructed using the best technology currently available to prevent additional contributions of suspended solids and sediment to streamflow outside the permit area to the extent possible. Sediment control structures and details are discussed in Appendix 7-4.

742.212 The siltation structures (i.e. sediment ponds) will be constructed prior to any coal mining and reclamation operations. Upon construction, the ponds and any other siltation structures will be certified by a qualified registered professional engineer to be constructed as designed and approved in the reclamation plan.

742.213 The sediment ponds will be designed, constructed and maintained in accordance with all applicable regulations. See 732.200, 733.200 and Appendix 7-4 for details.

742.214 Any discharge of water from underground workings to surface waters will meet applicable effluent limitations of 751. If such water is found not to meet those requirements, the water will be treated underground prior to discharge, or passed through a siltation structure prior to leaving the permit area.

742.220 Sedimentation Ponds The sedimentation ponds will meet the following criteria:

742.221.1 The ponds will be used individually;

742.221.2 The pond ~~is~~s are located at the lower end of the disturbed area and out of any perennial stream (See Plate 7-5);

742.221.3 The sediment ponds will be designed, constructed and maintained to:

742.221.31 The pond ~~is~~s are designed to contain the runoff from a 10 year - 24 hour precipitation event for the area in addition to a minimum of 2 years of sediment storage.

742.221.32 The pond ~~is~~s are designed to provide a minimum of 24 hour retention of the runoff from a 10 year - 24 hour precipitation event.

742.221.33 The pond ~~is~~s are designed to contain the runoff from a 10 year - 24 hour precipitation event plus a minimum of 2 years of sediment storage.

742.221.34 ~~A n~~Nonclogging dewatering device ~~is~~s are proved as described in Appendix 7-4.

742.221.35 This will be accomplished by proper design, construction and maintenance of the ponds as described in Appendix 7-4.

742.221.36 As discussed in Appendix 7-4, sediment will be removed when the level reaches the 2 year storage level. Since the pond ~~is~~s are oversized, this leaves adequate room for storage of the design event.

742.221.37 The sediment ponds construction ensures against excessive settlement. See ~~"Sediment Pond"~~"Design and Construction ~~Requirements"~~Specifications for Sedimentation Pond" in Appendix 7-4.

742.221.38 Sediment ponds will be free of sod, large roots, frozen soil, and acid- or toxic-forming coal processing waste. See ~~"Sediment Pond"~~Design and Construction ~~Requirements"~~Specifications for Sedimentation Pond" in Appendix 7-4.

742.221.39 The sediment ponds will be compacted properly. See ~~"Sediment Pond"~~Design and Construction ~~Requirements"~~Specifications for Sedimentation Pond" in Appendix 7-4.

742.222 Sediment Ponds Meeting MSHA Criteria The proposed ponds do~~es~~ not meet the size or other qualifying criteria of MSHA, 30 CFR 77.216(a). Therefore, this section is not applicable.

742.223 Sediment Ponds Not Meeting MSHA Criteria As discussed in Appendix 7-4, the ponds will be equipped with ~~a~~ principle spillway ~~culvert~~ and ~~an open channel~~emergency spillway culverts each sized to safely discharge runoff from a 25 year - 6 hour precipitation event.

742.223.1 The Principle Spillway ~~culvert is~~ culverts and the Emergency ~~Overflow C~~Spillway culverts will be corrugated, metal pipe. Each one designed to carry sustained flows.

742.223.2 N/A - See 742.223.1

742.224 N/A - See 742.223.1

742.225 N/A - No exception requested.

742.225.1 N/A

742.225.2 N/A

742.230 Other Treatment Facilities No other treatment facilities are planned for this operation. Therefore, Section 742.230 is not applicable.

742.240 Exemptions No exemptions are requested at this time; however, since this is a new proposed operation, the need for Small Area Exemptions and/or Alternate Sediment Control Areas may arise in the future.

742.300 Diversions

742.310 General Requirements

742.311 All diversions are considered temporary, and will be removed upon final reclamation.

Diversions are designed to minimize adverse impacts to the hydrologic balance within the permit and adjacent areas, to prevent material damage outside the permit area and to assure the safety of the public detailed diversion designs are presented in Appendix 7-4 of this P.A.P.

742.312 See Appendix 7-4 for diversion designs.

742.313 As indicated, all diversions for the Lila Canyon Mine are temporary, and will be removed when no longer needed. Land disturbed by removal will be reclaimed in accordance with R645-301 and R645-302. Prior to diversion removal, downstream water treatment facilities will be modified or removed. See Reclamation Hydrology Section of Appendix 7-4.

742.320 Diversion of Perennial and Intermittent Steams Section 742.320 is not applicable since there are no diversions planned for perennial or intermittent streams within the permit area.

742.330 Diversion of Miscellaneous Flows All diversions within the permit area are of miscellaneous flows.

742.331 Certain miscellaneous undisturbed flows are proposed to be diverted around the disturbed area. Other flows are diverted within the disturbed area and to the sediment ponds, as described in Appendix 7-4.

742.332 See Appendix 7-4.

742.423.3 Drainage ditch design details are provided in Appendix 7-4.

742.423.4 There are plans to alter the drainage channel on the south boundary of the disturbed area. This drainage is an ephemeral channel with no raiparian habitat. A stream alteration permit will not be required for this channel. A 60-inchby-pass culvert and a sedimentation pond will be placed in this channel. Installation of this culvert and sedimentation control plans are described in Appendix 7-4. To ensure that state of the art technology is incorporated, the final reclamation plans for the sedimentation pond area will be submitted prior to commencement of final reclamation of this area.

742.423.5 Stream channel crossings will be provided by culverts designed, constructed and maintained using current, prudent engineering practice, as described in Appendix 7-4.

743. Impoundments

743.100 General Requirements All impoundments associated with this operation are considered temporary.

743.110 Not applicable there are no impoundments planned that meet the criteria of MSHA, 30 CFR 77.216 (a).

743.120 The design of impoundments have been prepared and certified by a qualified, registered professional engineer. As described in Appendix 7-4, the proposed sediment ponds will have at least 2' of freeboard above the highest flow level in the emergency spillway, which is adequate to resist overtopping by waves and by sudden increases in storage volumes.

743.130 As described in Appendix 7-4, the sediment ponds will be equipped with a culvert riser principal spillway and a culvert riser

emergency overflow sized to safely pass the runoff from a 25 year - 6 hour precipitation event.

743.131 The principal spillway design is discussed below.

743.131.1 The principle spillway will be constructed of corrugated metal pipe. The emergency spillway will also be constructed of corrugated metal pipe.

744. Discharge Structures

744.100 The sediment ponds emergency spillway will be a vertical corrugated metal pipe. ~~I~~For Sediment Pond 1, it will flow into ~~a 60" diameter~~the UC-1 C.M.P. beneath the pond and discharge onto an engineered rip-rap apron to prevent scouring or erosion. For Sediment Pond 2, the discharge will be via C.M.P. (See Appendix 7-4).

Diversions and culvert outlets that are expected to have flow velocities in excess of 5 fps will also be equipped with erosion and velocity controls as described in Appendix 7-4.

744.200 Discharge structures have been designed and certified according to standard engineering design procedures. (See Appendix 7-4).

745. Disposal of Excess Spoil Section 745 is not applicable since there are no plans for disposal of excess spoil at the Lila Canyon operation.

746. Coal Mine Waste The area designated for coal mine waste disposal is within an existing depression area which is located beneath and around the proposed coal storage pile area as shown on Plates 5-2, 7-2 and 7-5. This disposal area will be used for disposal of the rock slope material, reject from coal processing, coal contaminated waste from the mine (i.e. roof falls, etc.) and/or sediment pond waste.

The designated waste area will be within the disturbed area and drained to the sediment pond, and will be constructed according to Division and

WordPerfect Document Compare Summary

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would not reach the Colorado Drainage in any reasonable time, if ever, and thus water consumed underground cannot negatively effect the Colorado River Basin.

Surface Dust Suppression It has been estimated that usage on the surface for dust suppression will be approximately 10,000 gallon per day or 3,650,000 gallons per year. This results in a usage of 11.20 acre feet per year.

Direct Diversions - no consumption.

Adding the four losses due to mining equals to 80.81 acre feet which is below the mitigation level of 100 acre feet. UEI does hold 362.76 acre feet of underground water rights to offset any consumption. Therefore, it is the opinion of UtahAmerican Energy, Inc. that water consumption by underground coal mining operation will NOT jeopardize the existence of or adversely modify the critical habitat of the Colorado River endangered fish species.

The Permittee is aware that regardless of state-appropriated water rights held by the Permittee, ay water consumption over 100 acre-feet per year is subject to a per acre-foot fee payable to the USFWS. And, that the actual water consumption reported in the annual report once mining operations have commenced, might be subject to a Section 7 consultation with the USFWS.

Conclusion

Based on available data and expected mining conditions, the proposed mining and reclamation activity is not expected to proximately result in contamination, diminution or interruption of an underground or surface source of water within the proposed permit or adjacent areas which is used for domestic, agricultural, industrial, wildlife or other legitimate purpose.

It should be noted that the determination of no known depletion of flow or quality is based on available data, which is primarily post-mining. UtahAmerican Energy Inc. will report actual water depletion values annually in the Annual Report.